

MILLENNIALS

IN THE OIL & NATURAL GAS AND PETROCHEMICAL INDUSTRIES

With nearly 1.9 million job opportunities projected in the oil & natural gas and petrochemical industries through 2035, there is a vast opportunity for the industry to attract, retain, and develop lifelong careers for Millennials. Millennials today have unique characteristics that will enable them to power past impossible. By harnessing this generation's unshakable confidence in a better future and use of technology, the industry is positioned well to address tomorrow's greatest challenges.

Millennials already account for more than one-third of today's workforce in the oil and natural gas industry.

GENERATION ATTRIBUTES

Millennials as a group are more diverse and better educated than previous generations, providing an opportunity for our industry to tap a broader set of skills and more diverse intellect, creativity and perspectives than ever before, which will strengthen our industry now and into the future.

Compared to Baby Boomers and Gen-Xers, Millennials are:

- **More diverse**—45% of Millennials in 2016 were Hispanic, African American or from some other minority group, compared to one-third of Gen-Xers and 22% of Baby Boomers at a corresponding age.
- **Better educated**—About 66% of Millennials age 25-34 in 2016 have had at least some college coursework, compared with 56% of Gen-Xers at a corresponding age and 45% of Baby Boomers.
- **More likely to be in professional, technical, and service occupations**—Nearly 50% of working Millennials are employed in professional, technical, and service occupations compared to 33% of Gen-Xers and 30% of Baby Boomers at the same age.

The oil & natural gas and petrochemical industries must employ the next generations' best and the brightest and harness their potential. Only then can we meet the challenges we will undoubtedly face and create tomorrow's innovations that will allow our nation to power past what we consider impossible today.

MILLENNIALS IN THE INDUSTRY¹

- Millennials account for **34% of total industry employment**, nearly identical to Millennials' 35% share in the overall U.S. economy in 2015. This shows that Millennials are choosing to work for the oil & natural gas and petrochemical industries at the same rate as other industries.
- Millennials' share of employment is highest in blue collar occupations within the oil & natural gas and petrochemical industries, despite a national trend of this generation shifting away from blue collar jobs. Millennials account for **46% of all industry employment in unskilled blue collar occupations and 42% in semi-skilled blue collar occupations**.

Millennials are defined as those born in 1981-2000 (and immigrants of corresponding ages). Thus, in 2015 Millennials in the workforce of ages 18-34 are those born in 1981-1997.





- **Millennials will be nearly 41% of our workforce – a 20 percent increase – by 2025.** As they complete their educations and move fully into the workforce, Millennials will account for most of the rising replacement requirements in the oil & natural gas and petrochemical industries.
- The share of Millennials in managerial, business and financial occupations and in professional and related occupations **will increase to 39% by 2025.**

A REAL LIFE IMPACT FOR MILLENNIALS

The nearly 1.9 million direct job opportunities projected through 2035 in the oil & natural gas and petrochemical industries speak to the continuing importance of these industries in the U.S. economy, and to individuals and families looking for lifelong, well-paying career opportunities. In fact, based on average annual wage data from the Bureau of Labor Statistics, **the average annual pay in the oil and gas industry is nearly \$50,000 higher** than the 2016 U.S. average, and those with STEM skills earn the most.²

A significant number of the oil and natural gas industry positions that Millennials will be needed to fill require strong skills in the STEM disciplines across all education levels. In fact, **holding a STEM bachelor's degree nearly doubles the likelihood of working in the oil and natural gas industry**, and earning a degree in an industry-specific or -related field increases the likelihood of working in the industry by three to seven times. Increasing the number of Millennials who earn these types of degrees will provide these industries, and others, more opportunities to hire workers of this generation.



¹ The estimates and projections of Millennial employment in the oil and natural gas industry presented here were developed to be consistent with estimates for 2015 and baseline employment projections in a March 2016 report prepared by IHS Markit for the American Petroleum Institute, Minority and Female Employment in the Oil & Natural Gas and Petrochemical Industries, 2015-2035.

² RAND Corporation, "Postsecondary Education and STEM Employment in the United States: An Analysis of National Trends With a Focus on the Oil and Natural Gas Industry," November 2017.

America's Oil and Natural Gas Industry

ENERGY WORKS

For America



OUR ENERGY FOUNDATION

The United States is the world's leading producer of oil and natural gas, and as a result of greater use of clean-burning natural gas and cleaner, more efficient fuels, we are also a world leader in reducing carbon emissions and other air pollutants. We have a proven model for achieving environmental progress without sacrificing jobs, economic growth, energy security or consumer affordability. Our political leadership has the opportunity to continue, and expand upon, the American energy revolution.

In the past decade alone, technological advances in oil and natural gas production have ushered in a new era. American crude oil production jumped 88 percent between 2008 and 2015, and natural gas production increased 48 percent since 2005. The turnaround has helped reduce gasoline prices, fuel imports, and heating and electricity costs for households and businesses, while at the same time cutting carbon emissions from energy to near 20-year lows. Technological improvements are not just limited to production; between 1990 and 2014, U.S. refiners spent \$154.4 billion on

environmental improvements—helping contribute to cleaner air. These technological advances have moved us from an era of energy scarcity to one of energy abundance in a few short years. Washington can make energy policy choices that will continue our national progress, such as:

- » Implementing policies that recognize our energy reality, both today and tomorrow, and are based on sound science and economics.
- » Embracing our new era of American energy abundance and protecting the progress made, avoiding a return to decades of insecurity and scarcity.
- » Seizing the career opportunities that the oil and gas sector provide to a diverse American labor force with the potential to break the cycle of generational poverty.
- » Insisting our government regulatory systems perform their duty of protecting the public in a timely and efficient manner; avoiding unnecessary, duplicative rules that place undue burdens on energy development and distribution.
- » Recognizing the best way to achieve our energy and environmental goals is not with government mandates, but through private innovation and investment, in cooperation with governments at all levels.

American energy is working and the goal of a national energy policy must be to ensure a secure supply of abundant, affordable, and available energy for the American people in an environmentally responsible manner.

September 2016

For the latest report, please visit www.api.org and www.ozonefacts.com



CAREER OPPORTUNITIES FOR WOMEN AND MINORITIES

Based on federal data, the average annual pay in the oil and natural gas industry is more than \$100,000 – nearly \$50,000 higher than the 2014 U.S. average. That's good news, and the even better news is that the oil and natural gas industry is projected to have significant job gains for women, African Americans and Hispanics between now and 2035 according to a [2016 report by consulting firm IHS](#), which projects significant job gains for women, African Americans and Hispanics between now and 2035. Here are some of the principle findings: Nearly 1.3 million job opportunities by 2025 and close to 1.9 million job opportunities by 2035 will be in the oil & natural gas and petrochemical industries considering all types of job growth.

- » 707,000 jobs, or 38% of the total, are projected to be filled by African American and Hispanic workers through 2035. (131,000 for African Americans and 576,000 for Hispanics).
- » Women in the industry are projected to account for more than 290,000 of the job opportunities, 16% of the total through 2035.

"The magnitude of these opportunities speaks to the continuing importance of the oil and natural gas and petrochemical industries in the U.S. economy as a whole as well as to individuals and families looking for well-paying career opportunities.

As seen in this report, minority communities and women represent critically vital and available talent pools to help meet the industry's future workforce demands." —IHS

OPPORTUNITIES FOR MINORITIES

The share of minorities employed in the oil & natural gas and petrochemicals industries is rising: Minority employment will rise from about one-quarter of the total in 2015 to more than one-third (36%) in 2035.

African American and Hispanic workers are projected to make up over one-fourth of the new hires in management, business, and financial jobs in the industry through 2035.

Meaningful career opportunities also exist in the industry for other minority groups, such as Native Americans and Asian Americans. For example, in 2011 an estimated 20% of known U.S. oil and natural gas reserves were beneath tribal lands, with the Department of the Interior estimating that Indian lands could produce up to 5.35 billion barrels of oil and 37.7 trillion cubic feet of natural gas.

OPPORTUNITIES FOR WOMEN

There are already more than 237,000 women working in the oil & natural gas and petrochemical industries. Nearly half of those women (over 114,000) work in management and professional occupations.

IHS projects continued opportunity for women in management and professional fields, with women accounting for 154,000 of these job opportunities through 2035.

Much of the job growth is projected to occur in blue collar professions. There is significant potential for female blue collar employment if interest and training are directed toward women to increase female participation in those areas.

OPPORTUNITIES BY OCCUPATION

Fifty-seven percent of the job opportunities through 2035 are projected to be in blue collar occupations. This suggests tremendous opportunity for workers with a high school diploma and some post-secondary training (e.g., certificates and community college).

One-third of the job opportunities are projected to be in management and professional fields such as engineering, geoscience, management, finance, and as technicians. African Americans, Hispanics, and women who successfully complete college degrees in these fields would be highly competitive for workforce placement.



AMERICA'S OFFSHORE OPPORTUNITY

America's vast offshore energy reserves present an opportunity to improve our economy, increase our energy security and create tens of thousands of jobs. Opening the U.S. Atlantic Outer Continental Shelf (OCS) alone to offshore oil and natural gas development could create nearly 280,000 new jobs along the East Coast and across the country, as well as result in an additional \$195 billion in new private investment and contribute billions per year to the U.S. economy.

Oil and natural gas production off our Atlantic coast is a potential gold mine. Developing oil and natural gas in the Atlantic could put hundreds of thousands of Americans to work, make us more energy secure and bring in needed revenue for the government. But none of these benefits will appear unless the federal government follows pro-development energy policies.



In January 2015, the Obama administration proposed a limited offshore leasing program to develop resources in the Gulf of Mexico, off the coast of Alaska and along the Atlantic OCS. Americans stand to benefit if the Atlantic and other offshore areas that have been kept off-limits are included in the next five-year leasing program.

"NORTH CAROLINA HAS ABUNDANT OFFSHORE ENERGY RESOURCES THAT HAVE THE POTENTIAL TO CREATE THOUSANDS OF JOBS, PRODUCE MUCH-NEEDED REVENUE AND MOVE US CLOSER TO ENERGY INDEPENDENCE."

— Governor Pat McCrory



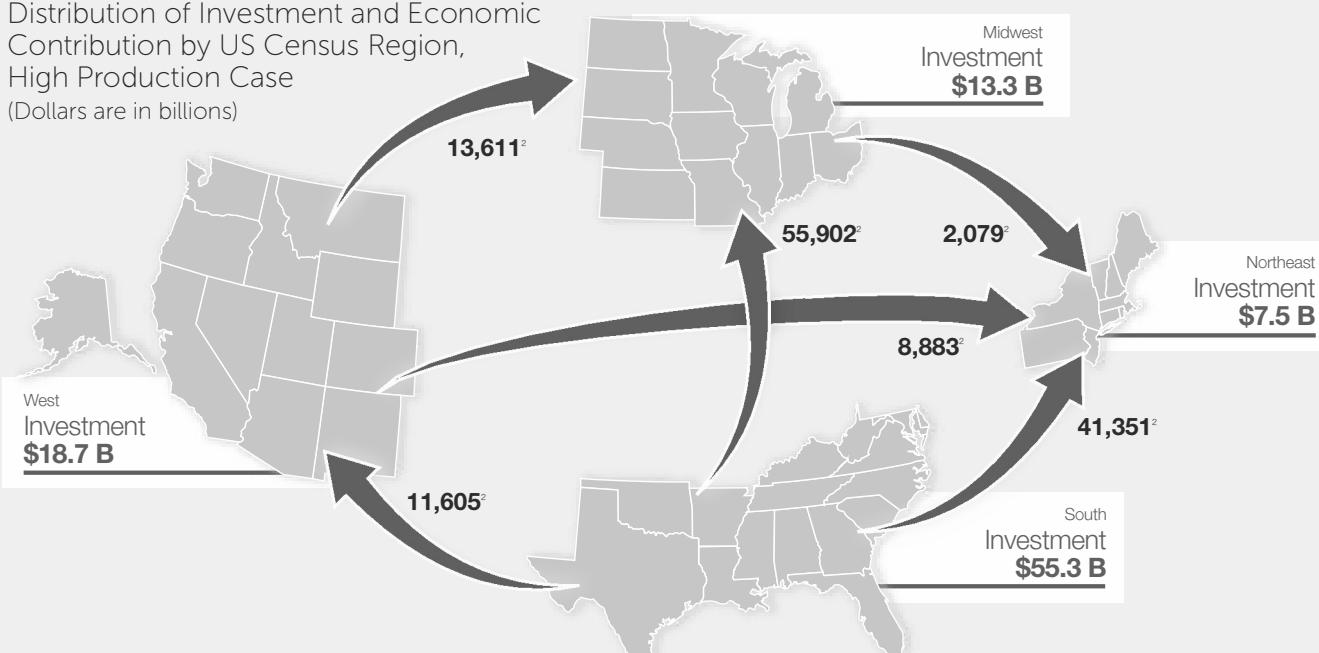
OPPORTUNITIES IN INFRASTRUCTURE

America's energy infrastructure system is critical to the efficient movement of crude oil and natural gas to refineries and to businesses and consumers as end customers. Keeping that infrastructure current for today's energy realities will be among the energy choices facing policymakers in 2014 and beyond. Surging production in the Northeastern U.S., remote locations like the Bakken region and the Canadian oil sands require not only expanded transportation capacity but a wholesale redesign of the energy infrastructure network.

Relative to today's production realities, the existing energy transportation system is virtually upside down, and righting it will eliminate costly inefficiencies as well as generate substantial economic growth.

Updating infrastructure to our new energy reality could, per an IHS study, generate an estimated \$1.15 trillion in capital investments between 2014 and 2025. These investments in midstream and downstream infrastructure — including pipelines, storage, processing, rail, and marine components — will ripple through the U.S. economy creating jobs, increasing GDP and labor income, and boosting tax revenue to federal, state, and local governments. Midstream and downstream infrastructure investment could support as many as an estimated 1.15 million jobs on an average annual basis over the 2014-2025 period, adding up to \$120 billion on average per year to the economy and generating up to \$27.5 billion in average annual revenue to the government. Pipeline investment alone could support up to 830,769 jobs on an average annual basis over the 2014-2025 period.

Distribution of Investment and Economic Contribution by US Census Region,
High Production Case
(Dollars are in billions)



SOURCE: IHS, "Oil & Natural Gas Transportation & Storage Infrastructure: Status, Trends, & Economic Benefits," December 2013

¹ The phrase "Jobs originating in this region" is shorthand for "U.S. jobs supported as a result of direct capital investment made in this U.S. Census Region"

² Each arrow shows the net redistribution of jobs between two regions

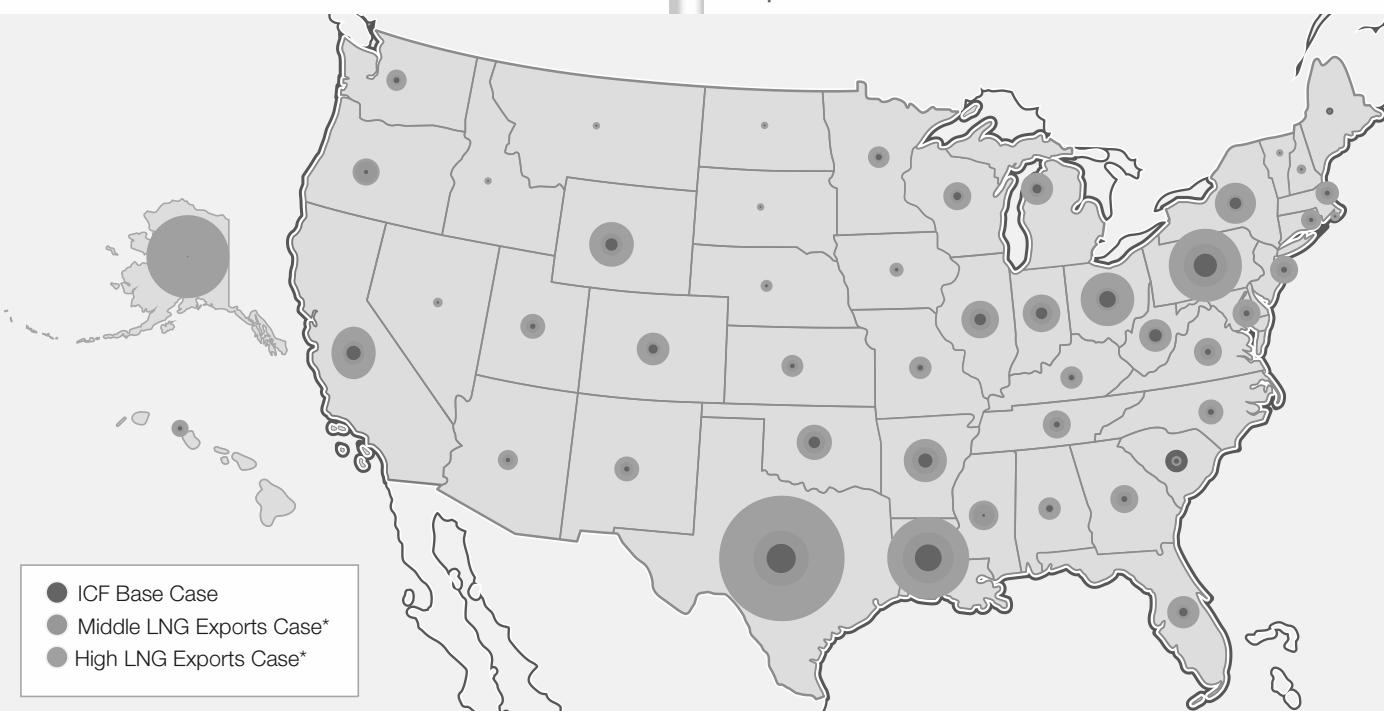


OPPORTUNITY IN TRADE

America is in the midst of an energy revolution and for American workers, the best is yet to come. The export of liquefied natural gas — or LNG — represents one of the most promising economic opportunities of the shale revolution. These exports will significantly reduce our trade deficit, increase government revenues, grow the economy, and support millions of U.S. jobs in engineering, manufacturing, construction, and facility operations. The opportunities associated with LNG exports will extend beyond natural gas-producing states, and the economic impacts could be substantial in many areas. According to ICF, by 2035:

- » LNG exports could contribute as much as \$10 to \$31 billion per state to the economies of natural gasproducing states.
- » Other states will also benefit, partly due to the boost in demand for steel, cement, equipment, and other goods. States with a large manufacturing base, such as Ohio, California, New York, and Illinois, will see economic gains as high as \$2.6 to \$5.0 billion per state.
- » Natural gas-producing states could see employment gains as high as 60,000 to 155,000 jobs; and large manufacturing states, such as California and Ohio, could see employment gains of up to 30,000 to 38,000 jobs in 2035.
- » There could also be significant job growth in states where LNG export terminals could be built. For example, in a high export scenario, in which an Alaska-based terminal is built, Alaska could see up to a \$10 billion addition to state income and over 36,000 added jobs resulting from LNG exports.

America is in a global race to build this infrastructure and secure a competitive position in the international market. More than 60 international LNG export projects are currently planned or under construction around the world, and those nations that act quickly to attract these investments will reap the economic rewards. Fortunately, U.S. workers are in a very good position to win that race.





WHAT THEY ARE SAYING

RAHM EMANUEL, CHICAGO MAYOR

"Cheap energy—the revolution that's going on in America's heartland on energy—is making sure that America now has a manufacturing renaissance."

VIRG BERNERO, MAYOR OF LANSING, MICHIGAN

"We're all aware of the incredible impact the energy revolution is having on our national economy. The growing competitiveness and increase in employment from these manufacturing sectors are important to our cities and metro economies."

SARA HIGGINS, CITY OF MIDLAND, TEXAS

"Right now our economy is booming due to the increased oil and gas activity here in town. We have great business opportunities here in Midland."

JOHN H. THOMPSON, DIRECTOR, U.S. CENSUS BUREAU

"Mining, quarrying, and oil and gas extraction industries were the most rapidly growing part of our nation's economy over the last several years."

JIM FITTERLING, DOW CHEMICAL, TALKING ABOUT THE IMPACT OF NEW PETROCHEMICAL INVESTMENT

"This validates everything we've been trying to say about the potential of energy resources to recharge the U.S. economy. It's coming and it's real and it will have an impact."

JERRY ZEIDERS, PLANT MANAGER FOR GARDNER DENVER (PA), which makes and fixes pumps used in the Marcellus Shale

"We will be adding more jobs this year ... We are going to continue to grow. We have just scratched the surface of the things we can do in the Northeast."

BETSEY HALE, LOVELAND COLORADO ECONOMIC DEVELOPMENT DIRECTOR

"It's not always the job on the rig or the well. There's a whole host of jobs other than the guy who's actually fracking. ... A lot of people who were out of work during the recession are now working because of oil and gas, and energy in general."

ROLAND MOWER, CEO, CORPUS CHRISTI (TEXAS) REGIONAL ECONOMIC DEVELOPMENT CORP.

"This region is experiencing an uptick in interest from international manufacturers interested in leveraging our low-cost, politically stable supply of natural gas as a fuel source for their manufacturing processes and our immediate proximity to the U.S. (Western Hemisphere) markets."

NATURAL GAS AND OIL

A CRITICAL CONTRIBUTOR TO AMERICAN PROSPERITY

The natural gas and oil industry is a critical part of the U.S. economy. In 2015, these energy resources supported 10.3 million jobs and contributed more than \$1.3 trillion to the U.S. economy.



VETERANS AND ENERGY

OPPORTUNITIES IN THE OIL & NATURAL GAS INDUSTRY

Vets4Energy



A vast opportunity exists for the oil and natural gas industry to attract, retain, and develop lifelong careers for veterans in the industry. Over the next four years, the Department of Defense estimates that approximately one million service members will transition out of the military. In addition, the Department of Veterans Affairs reports that there are more than 12 million veterans under the age of 65 living in the U.S. These veterans and military service members are highly trained in a wide variety of occupational areas; **their extensive skills attained from their military training and experience make them ideal candidates to fill the projected 1.9 million job opportunities available in the oil and natural gas industry.**

VETERANS IN OIL & GAS

Over the last several years the number of veterans working in the oil and gas and petrochemical industries has been growing with **nearly 185,000 veterans employed in 2014**. These veterans are diverse, with **nearly 6,000 female veterans and more than 41,000 minority veterans filling positions in all sectors of the industry and across all regions of the country**. The West South Central, Middle Atlantic, and South Atlantic regions are especially prominent for veterans, with those three regions accounting for 60% of all veterans employed in the oil and gas industry. The oil & gas and petrochemical industries consistently employ larger shares of veterans than both the government and the private sector.

In 2014, veterans accounted for:

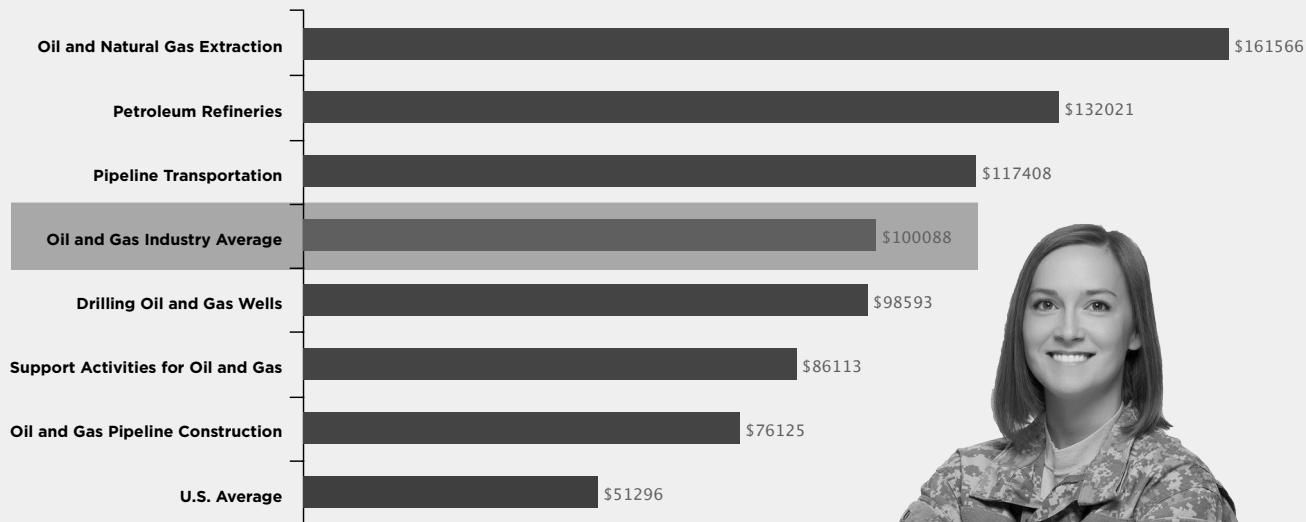
10.5% of the oil & gas and petrochemical industry workforce	10.4% of the government workforce	6.5% of the private sector workforce	7% Overall veterans accounted for 7% of total employment in the U.S.
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VETERANS AND ENERGY

BENEFITS

Jobs in the oil and natural gas industry offer good benefits, high pay, and the opportunity to make a difference. Based on 2014 average annual wage data from the Bureau of Labor Statistics, **the average pay in the oil and gas industry is nearly \$50,000 higher than the U.S. average.**

AVERAGE ANNUAL WAGE - 2014



CONNECTING MILITARY TRAINING TO OIL & GAS JOBS

Workforce training is critical to the projected industry growth that will keep the nation at a competitive advantage and provide the energy the nation depends on. Veterans come to the civilian workforce with extensive technical and nontechnical skills gained through military experience and training; many of these skills have direct applicability to the oil and gas industry, making it an ideal industry for transitioning service members and veterans.

A key element in achieving a growing level of veterans to fill oil and gas industry jobs is to relate those skills that they have developed to the skills needed in industry. The challenge of translating military skills to civilian occupations can be daunting for both veterans and hiring managers. This is why the American Petroleum Institute has **developed the *Veterans Energy Pipeline*, an online tool for veterans and civilians that highlights the links between military occupations and top oil and gas jobs.** The tool also shows where there may be gaps in needed skills; it is vital to connect veterans with ways to supplement their skills with additional education and training that may be required for available positions.

Access the tool by visiting www.veteransenergypipeline.com.



To: Funes, Jason[jason_funes@ios.doi.gov]
From: Chrissy Harbin
Sent: 2018-01-22T14:59:40-05:00
Importance: Normal
Subject: Re: Research Of Valuable Use
Received: 2018-01-22T15:00:15-05:00

Thank you so much for this!!

From: "Funes, Jason" <jason_funes@ios.doi.gov>
Date: Monday, January 22, 2018 at 2:39 PM
To: Chrissy Harbin <CCharbin@afphq.org>
Subject: Fwd: Research Of Valuable Use

Hey Chrissy,

I wanted to follow up with you regarding some data/research regarding the economic impact of the energy industry both onshore and offshore.

I realize there are other organizations other than API that may publish work regarding this information, but as I browsed their website, this information seemed to stand out. I encourage you to use this or any other valid information regarding the economic impact the energy industry has here in the U.S. Also see the attached documents that are quite insightful.

2014's information that is still pertinent (bullet points):

<http://www.api.org/oil-and-natural-gas/wells-to-consumer/exploration-and-production/offshore/benefits-of-us-offshore-oil-and-natural>

<http://www.api.org/news-policy-and-issues/american-jobs/oil-gas-stimulate-american-jobs>

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541

To: Wynn, Todd[todd_wynn@ios.doi.gov]
Cc: Martha Boneta[martha@marthaboneta.com]; jason_funes@ios.doi.gov[jason_funes@ios.doi.gov]
From: Benjamin Knotts
Sent: 2018-01-23T08:36:37-05:00
Importance: Normal
Subject: Re: Hi Todd & Jason! Re: Sec Ryan Zinke Speaking Engagement?
Received: 2018-01-23T08:36:48-05:00

Thanks team!!! And thanks Martha for connecting us! Todd, I'll give you a call later this morning. Appreciate you both!

Sent from my iPhone

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA

On Jan 23, 2018, at 8:34 AM, Wynn, Todd <todd_wynn@ios.doi.gov> wrote:

Thanks for the connection Martha. I have been seeing your pictures in the Middle East. Looks like an exciting trip.

Ben,

Feel free to give me a ring on my office line today and we can discuss.

Todd

Todd M. Wynn
Director of the Office of Intergovernmental and External Affairs
Office of the Secretary
U.S. Department of the Interior
Desk: (202) 208-6649
Cell: (202) 897-7269

On Mon, Jan 22, 2018 at 6:10 PM, Martha Boneta <martha@marthaboneta.com> wrote:

Dear Todd and Jason:

I hope all is well. I am in the Middle East right now traveling, but want to take this opportunity to introduce you to Ben Knotts with AFP. I have copied Ben on this email too but his offices aren't as cool as DOI. Can anything compare to a life size Polar Bear with a Santa hat?

I'm a huge fan of Ryan Zinke as you both know. Ben was hoping to speak with you today briefly about having Secretary Zinke speak at an upcoming event.

I look forward to seeing you both when I return next week. Thank you for all you guys do! You are both the best of the best.

Sincerely yours,

Martha Boneta
America First Policies
(571)939-1143

Washington, DC

Palm Beach

New York

--

Todd M. Wynn
Director of the Office of Intergovernmental and External Affairs
Office of the Secretary
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NOTE: *Every email I send or receive is subject to release under the Freedom of Information Act.*

To: Wynn, Todd[todd_wynn@ios.doi.gov]; Martha Boneta[martha@marthaboneta.com]
Cc: jason_funes@ios.doi.gov[jason_funes@ios.doi.gov]; Lauren Toomey[ltoomey@afphq.org]
From: Benjamin Knotts
Sent: 2018-01-23T11:12:03-05:00
Importance: Normal
Subject: RE: Hi Todd & Jason! Re: Sec Ryan Zinke Speaking Engagement?
Received: 2018-01-23T11:12:20-05:00
[Secretary Zinke.pdf](#)

Todd,

Thanks for the call earlier. I'm attaching the "official" invitation to Secretary Zinke. We appreciate you!

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | [@AFPVA](#) | [www.thevirginiatrust.com](#)

From: Wynn, Todd [mailto:todd_wynn@ios.doi.gov]
Sent: Tuesday, January 23, 2018 8:35 AM
To: Martha Boneta <martha@marthaboneta.com>
Cc: jason_funes@ios.doi.gov; Benjamin Knotts <BKnotts@afphq.org>
Subject: Re: Hi Todd & Jason! Re: Sec Ryan Zinke Speaking Engagement?

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Sincerely yours,

Martha Boneta
America First Policies
(571)939-1143

Washington, DC
Palm Beach
New York

--

Todd M. Wynn
Director of the Office of Intergovernmental and External Affairs
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U.S. Department of the Interior
Desk: (202) 208-6649
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NOTE: Every email I send or receive is subject to release under the Freedom of Information Act.



Secretary Zinke:

On behalf of over 100,000 activists in Virginia, Americans for Prosperity Virginia would like to extend an invitation to speak on February 5th at our annual lobby day in Richmond. This annual event is where our volunteers from across Virginia join together to motivate their legislators to stand with an agenda that trusts the Virginian people with how best to use their talents and resources.. This opportunity will allow you to address over 250 of our best volunteers.

We are very interested in hearing the Secretary share what has been done on the Federal level to restore the energy industry of Virginia. Given President Trump's commitment to the working class who depend on energy jobs—our volunteers, who have been lobbying for these reforms, would very much appreciate an affirmation from the administration. Our new Governor, Ralph Northam, has made it a priority to undo the progress the administration has made so the Secretary's presence would bring attention to the work we are doing to defend the vulnerable families dependent upon the energy industry who are hoping to see their economic rights restored. This agenda can be reviewed at www.thevirginiatrust.com.

Please accept this invitation and join us in this common endeavor. Thank you.

A handwritten signature in black ink, appearing to read "B. Knotts".

Rev. Benjamin Knotts
804.221.5879 | bknotts@afphq.org
Director of Grassroots
Americans for Prosperity Virginia

FAQS:

- Date: February 5th
- Time: We can accommodate the secretary anytime between 12pm and 5pm
- Location: SunTrust Auditorium
- Address: 919 E. Main St, Richmond, Virginia 23219
- Attendance: minimal 200
- Groups Represented in Attendance:
 - Freedom Partners Network (Generation Opportunity, Libre Initiative, Concerned Veterans of America)
 - Tea Party Federation
 - Virginia Oil and Gas Association
 - Many more
- Purpose of Event:
 - Draw awareness to policy agenda of Americans for Prosperity Virginia
 - Reinvigorate volunteers to continue their grassroots mission

To: Todd_Wynn@ios.doi.gov[Todd_Wynn@ios.doi.gov]; Jason Funes[jason_funes@ios.doi.gov]
From: Chrissy Harbin
Sent: 2018-01-23T22:27:26-05:00
Importance: Normal
Subject: Fwd: Secretary zinke
Received: 2018-01-23T22:27:39-05:00

Is this something you guys would be interested in partnering on? Happy to answer Q's about the opportunity--we historically have significant activist turnout at this event. Apparently AFP-VA already reached out, but I don't know to whom. Date is Feb 5.

Sent from my iPhone

Begin forwarded message:

From: Benjamin Knotts <BKnotts@afphq.org>
Date: January 23, 2018 at 7:47:32 PM EST
To: Chrissy Harbin <CCharbin@afphq.org>
Cc: Kacie Shallow <kshallow@afphq.org>, Jason Bauknecht <JBauknecht@afphq.org>
Subject: Re: Secretary zinke

I was blessed to have a contact in his office via Martha Boneta. They received an invite this morning after a conversation with me saying they were interested. If there's a way you could lobby him to accept that would be incredible!!!

Sent from my iPhone

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
[804.221.5879](tel:804.221.5879) | bknotts@afphq.org | [@AFPVA](https://twitter.com/AFPVA)

On Jan 23, 2018, at 7:24 PM, Chrissy Harbin <CCharbin@afphq.org> wrote:

Ben -- Excuse my slow reply. I LOVE this idea. I think Secretary Zinke would be the perfect fit. He's doing great things at DOI. Want me to reach out to his team and see what's possible?
Looping in others to make sure we're on the same page. -- Chrissy

Sent from my iPhone

On Jan 22, 2018, at 3:26 PM, Benjamin Knotts <BKnotts@afphq.org> wrote:

Secretary Zinke might be able to speak at our lobby day. Is he pretty solid on our issues? He could address our offshore

drilling conundrum in Virginia and other energy issues.

Ben Knotts | Grassroots Director | Americans for Prosperity -
Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA |
www.thevirginiatrust.com

To: Wynn, Todd[todd_wynn@ios.doi.gov]
Cc: Jason Funes[jason_funes@ios.doi.gov]
From: Chrissy Harbin
Sent: 2018-01-24T08:48:04-05:00
Importance: Normal
Subject: Re: Secretary zinke
Received: 2018-01-24T08:48:16-05:00

Sounds good, thank you.

Happy to chat but today's tight -- I could do 2-3 today. Alternatively could do 1:30-2:30pm or after 3 PM tomorrow

Sent from my iPhone

On Jan 24, 2018, at 7:51 AM, Wynn, Todd <todd_wynn@ios.doi.gov> wrote:

Thanks for flagging. I have chatted with Ben a bit on the phone yesterday about this and he sent over the invite. Invites for Sec go through a process as his schedule is quite busy. Ill see what I can do on this one.
We should chat though. Got like 5 minutes today?

Todd

On Tue, Jan 23, 2018 at 10:27 PM, Chrissy Harbin <CCharbin@afphq.org> wrote:

Is this something you guys would be interested in partnering on? Happy to answer Q's about the opportunity--we historically have significant activist turnout at this event. Apparently AFP-VA already reached out, but I don't know to whom. Date is Feb 5.

Sent from my iPhone

Begin forwarded message:

From: Benjamin Knotts <BKnotts@afphq.org>
Date: January 23, 2018 at 7:47:32 PM EST
To: Chrissy Harbin <CCharbin@afphq.org>
Cc: Kacie Shallow <kshallow@afphq.org>, Jason Bauknecht <JBauknecht@afphq.org>
Subject: Re: Secretary zinke

I was blessed to have a contact in his office via Martha Boneta. They received an invite this morning after a conversation with me saying they were interested. If there's a way you could lobby him to accept that would be incredible!!!

Sent from my iPhone

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA

On Jan 23, 2018, at 7:24 PM, Chrissy Harbin <CCharbin@afphq.org> wrote:

Ben -- Excuse my slow reply. I LOVE this idea. I think Secretary Zinke would be the perfect fit. He's doing great things at DOI. Want me to reach out to his team and see what's possible?
Looping in others to make sure we're on the same page. --
Chrissy

Sent from my iPhone

On Jan 22, 2018, at 3:26 PM, Benjamin Knotts <BKnotts@afphq.org> wrote:

Secretary Zinke might be able to speak at our lobby day. Is he pretty solid on our issues? He could address our offshore drilling conundrum in Virginia and other energy issues.

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia

804.221.5879 | bknotts@afphq.org | @AFPVA | www.thevirginiatrust.com

--

Todd M. Wynn

Director of the Office of Intergovernmental and External Affairs

Office of the Secretary

U.S. Department of the Interior

Desk: (202) 208-6649

Cell: (202) 897-7269

NOTE: *Every email I send or receive is subject to release under the Freedom of Information Act.*

To: Wynn, Todd[todd_wynn@ios.doi.gov]; Funes, Jason[jason_funes@ios.doi.gov]
Cc: Kacie Shallow[kshallow@afphq.org]; Benjamin Knotts[BKnotts@afphq.org]
From: Chrissy Harbin
Sent: 2018-01-30T10:07:14-05:00
Importance: Normal
Subject: Invitation to AFP-VA Lobby Day
Received: 2018-01-30T10:07:20-05:00
invite- Lobby Day.docx

Hi guys,

Following up on this AFP-Virginia lobby day. Excuse the short notice. Jason, would you still be available to speak and highlight the important work happening at DOI and its impact on Virginia? Details are below and attached.

Copying my colleagues Kacie Shallow who is handing the event details and Ben Knotts who is on the ground in VA.

Please let me know how I may help further. Thanks for considering!

Chrissy

- Date: February 5th
- Time: We can accommodate the secretary anytime between 12pm and 5pm
- Location: Suntrust Auditorium
- Address: 919 E. Main St, Richmond, Virginia 23219
- Attendance: minimal 200
- Groups Represented in Attendance:
 - Generation Opportunity
 - Libre Initiative
 - Concerned Veterans for America
 - Virginians for Quality Healthcare
 - Tea Party Federation
 - Virginia Oil and Gas Association
 - Many more
- Purpose of Event:
 - Draw awareness to policy agenda of Americans for Prosperity Virginia
 - Reinvigorate volunteers to continue their grassroots mission

To: Wynn, Todd[todd_wynn@ios.doi.gov]; Funes, Jason[jason_funes@ios.doi.gov]
Cc: Mac Zimmerman[MZimmerman@afphq.org]
From: Chrissy Harbin
Sent: 2018-01-31T09:41:14-05:00
Importance: Normal
Subject: New Americans for Prosperity POC for Interior
Received: 2018-01-31T09:41:20-05:00

Hi guys,

With my departure at the end of the week, I'd like to connect you to my friend/colleague Mac Zimmerman. He has a lot of insight on the shared policy priorities of AFP and Interior. He'll be a huge help to you on the OCS engagement.

Would you be able to include Mac on your distribution lists, and could you please work with him on AFP matters moving forward? For your convenience, I've pasted everyone's email signatures with contact information below. I encourage you to connect.

I've really enjoyed working with you in our current capacities — thank you for being such a helpful resource on the important actions coming out of your department. Looking forward to joining you on the inside and MAEGA! See you soon. — Chrissy

Todd M. Wynn
Director of the Office of Intergovernmental and External Affairs
Office of the Secretary
U.S. Department of the Interior
Desk: (202) 208-6649

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541

Mac Zimmerman | Americans for Prosperity
mzimmerman@afphq.org |

Chrissy Harbin | Vice President of External Affairs | Americans for Prosperity
M: (202) 560-1691 | E: charbin@afphq.org | T: [@ChrissyHarbin](https://twitter.com/ChrissyHarbin)

To: Chrissy Harbin[CHarbin@afphq.org]
Cc: Wynn, Todd[todd_wynn@ios.doi.gov]; Funes, Jason[jason_funes@ios.doi.gov]
From: Mac Zimmerman
Sent: 2018-01-31T09:53:42-05:00
Importance: Normal
Subject: Re: New Americans for Prosperity POC for Interior
Received: 2018-01-31T09:53:52-05:00

Thanks Chrissy, and thanks guys. Please let me know how I can help.

On Jan 31, 2018, at 9:41 AM, Chrissy Harbin <CHarbin@afphq.org> wrote:

Hi guys,

With my departure at the end of the week, I'd like to connect you to my friend/colleague Mac Zimmerman. He has a lot of insight on the shared policy priorities of AFP and Interior. He'll be a huge help to you on the OCS engagement.

Would you be able to include Mac on your distribution lists, and could you please work with him on AFP matters moving forward? For your convenience, I've pasted everyone's email signatures with contact information below. I encourage you to connect.

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Mac Zimmerman | Americans for Prosperity
mzimmerman@afphq.org |

Chrissy Harbin | Vice President of External Affairs | Americans for Prosperity
M: (202) 560-1691 | E: charbin@afphq.org | T: [@ChrissyHarbin](https://twitter.com/ChrissyHarbin)

To: Mac Zimmerman[MZimmerman@afphq.org]
Cc: Chrissy Harbin[CHarbin@afphq.org]; Wynn, Todd[todd_wynn@ios.doi.gov]
From: Funes, Jason
Sent: 2018-01-31T13:06:27-05:00
Importance: Normal
Subject: Re: New Americans for Prosperity POC for Interior
Received: 2018-01-31T13:07:04-05:00

Hey Mac,

I'm excited to speak to you and look forward to working with you!! Chrissy has been phenomenal to work with and I know she will be missed at AFP; (Shaq sized shoes to fill ;)

What is a good phone number to call you, and if possible, I would like to schedule a meeting with you and Chrissy this week.

I'm free any time tomorrow 12pm - 3pm or Friday I'm available most of the morning and afternoon. Do those times work for you guys?

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541

On Wed, Jan 31, 2018 at 9:53 AM, Mac Zimmerman <MZimmerman@afphq.org> wrote:

Thanks Chrissy, and thanks guys. Please let me know how I can help.

On Jan 31, 2018, at 9:41 AM, Chrissy Harbin <CHarbin@afphq.org> wrote:

Hi guys,

With my departure at the end of the week, I'd like to connect you to my friend/colleague Mac Zimmerman. He has a lot of insight on the shared policy priorities of AFP and Interior. He'll be a huge help to you on the OCS engagement.

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Jason Funes

**Special Assistant
Intergovernmental and External Affairs**

Office of the Secretary

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Mac Zimmerman | Americans for Prosperity

mzimmerman@afphq.org |

Chrissy Harbin | Vice President of External Affairs | Americans for Prosperity

M: (202) 560-1691 | E: charbin@afphq.org | T: [@ChrissyHarbin](https://twitter.com/ChrissyHarbin)

To: Chrissy Harbin[CHarbin@afphq.org]
Cc: Wynn, Todd[todd_wynn@ios.doi.gov]; Kacie Shallow[kshallow@afphq.org]; Benjamin Knotts[BKnotts@afphq.org]
From: Jason Funes
Sent: 2018-01-31T20:04:23-05:00
Importance: Normal
Subject: Re: Invitation to AFP-VA Lobby Day
Received: 2018-01-31T20:04:30-05:00

Juggernauts of Virginian Prosperity,

I may not be the Secretary of the Interior or a 23 year Navy SEAL veteran, but count on me to rally the troops!

I started getting paperwork together to get this speaking engagement approved, yet I will follow up via phone call with Ben tomorrow afternoon.

Thanks,

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Copying my colleagues Kacie Shallow who is handing the event details and Ben Knotts who is on the ground in VA.

Please let me know how I may help further. Thanks for considering!

Chrissy

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- Groups Represented in Attendance:
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 - Libre Initiative
 - Concerned Veterans for America
 - Virginians for Quality Healthcare
 - Tea Party Federation

- Virginia Oil and Gas Association
- Many more
- Purpose of Event:
 - Draw awareness to policy agenda of Americans for Prosperity Virginia
 - Reinvigorate volunteers to continue their grassroots mission

<invite- Lobby Day.docx>

To: Jason Funes[jason_funes@ios.doi.gov]
Cc: Chrissy Harbin[CHarbin@afphq.org]; Wynn, Todd[todd_wynn@ios.doi.gov]; Kacie Shallow[kshallow@afphq.org]
From: Benjamin Knotts
Sent: 2018-01-31T20:08:39-05:00
Importance: Normal
Subject: Re: Invitation to AFP-VA Lobby Day
Received: 2018-01-31T20:08:51-05:00

You're the man! Thank you!

Sent from my iPhone

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA

On Jan 31, 2018, at 8:04 PM, Jason Funes <jason_funes@ios.doi.gov> wrote:

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<invite- Lobby Day.docx>

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Cc: Wynn, Todd[todd_wynn@ios.doi.gov]; Kacie Shallow[kshallow@afphq.org]; Benjamin Knotts[BKnotts@afphq.org]
From: Chrissy Harbin
Sent: 2018-01-31T20:10:53-05:00
Importance: Normal
Subject: Re: Invitation to AFP-VA Lobby Day
Received: 2018-01-31T20:10:59-05:00

??????

Sent from my iPhone

On Jan 31, 2018, at 8:04 PM, Jason Funes <jason_funes@ios.doi.gov> wrote:

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I may not be the Secretary of the Interior or a 23 year Navy SEAL veteran, but count on me to rally the troops!

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Cc: Wynn, Todd[todd_wynn@ios.doi.gov]; Kacie Shallow[kshallow@afphq.org]; Benjamin Knotts[BKnotts@afphq.org]
From: Funes, Jason
Sent: 2018-02-01T13:25:56-05:00
Importance: Normal
Subject: Re: Invitation to AFP-VA Lobby Day
Received: 2018-02-01T13:26:34-05:00

I reached out to Ben and left a voice mail, but I am getting approvals to be able to attend and speak.

What time should I expect to speak?

How long should my remarks be?

Also feel free to call me as I may have a few other questions.

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
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Department of the Interior
Office: (202) 208-5541

On Wed, Jan 31, 2018 at 8:10 PM, Chrissy Harbin <CHarbin@afphq.org> wrote:

???????

Sent from my iPhone

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<invite- Lobby Day.docx>

To: Funes, Jason[jason_funes@ios.doi.gov]
From: Benjamin Knotts
Sent: 2018-02-01T22:58:21-05:00
Importance: High
Subject: RE: Invitation to AFP-VA Lobby Day
Received: 2018-02-01T22:58:32-05:00
[lobby day draft agenda \(AutoRecovered\).pdf](#)

Hey Jason! Feel free to speak for 15-20 minutes. Our theme is The Virginia Trust. It means liberty is effectively trust. We have to trust citizens or else there is no liberty. See attached for overview and messaging. Call me tomorrow for additional answers! Sorry. Was a crazy busy day today! I'll update agenda to include your name obviously. ☺

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA | www.thevirginiatrust.com

From: Funes, Jason [mailto:jason_funes@ios.doi.gov]
Sent: Thursday, February 01, 2018 1:26 PM
To: Chrissy Harbin <CHarbin@afphq.org>
Cc: Wynn, Todd <todd_wynn@ios.doi.gov>; Kacie Shallow <kshallow@afphq.org>; Benjamin Knotts <BKnotts@afphq.org>
Subject: Re: Invitation to AFP-VA Lobby Day

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Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541

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Sent from my iPhone

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Special Assistant
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<invite- Lobby Day.docx>



LOBBY DAY 2018 | 2.5.2017 | 12:45 – 5:00 PM EST

919 East Main Street | Suntrust Building – 4TH FLOOR | Richmond, VA

Point of Contact: Grassroots Director, Benjamin Knotts | 804.221.5879 | bknotts@afphq.org

Thank you so much for joining us at the “Trust Virginians Lobby Day!” Below are instructions, a line by line, and talking points for the event. Please let me know if you have additional questions.

Please arrive at least 10-15 minutes before you are scheduled to speak to check in with Ben Knotts. If you are running late or have a last minute schedule request, please contact Ben so he can adjust the schedule accordingly.

As a reminder, Americans for Prosperity is a grassroots free market advocacy group that does not endorse or coordinate with candidates or parties. Please ensure your comments stay focused on the free market policies we are advocating for and how they will benefit Virginia – and avoid any comments or references to candidates, elections or parties. All comments about an election, candidates or political parties are not compliant with our purpose. Any references to an individual lawmaker should be in reference to their support or opposition to free-market policies. By keeping your comments focused on our shared policy goals, you help ensure Americans for Prosperity can keep fighting for free market policy in Virginia for years to come.

If you have a brief biography you want read or a specific introduction – please forward that to bknotts@afphq.org with the subject line “Lobby Day Intro for (speaker’s name).”

The Virginia Trust

The ideas enshrined in Virginia's constitution convey an essential relationship between citizens and the government they form — a trust. The people of Virginia trust each other and their elected officials to preserve a free society that maximizes peace and well-being by first acting with integrity, respect, responsibility and toleration. In turn, officials must trust the citizenry and properly limit the role of government in society. When lawmakers and citizens work together to preserve this alliance, people are empowered to learn, earn and care for themselves. This is called The Virginia Trust.

- A Trust To Teach & Learn: There is trust between the government and citizens of Virginia to protect an individual's right to freely speak, teach and learn.
 - Legislative actions that support the trust to teach and learn:
 - *Education Savings Accounts* – ESAs enable families and students in Virginia to freely pursue educational opportunities that best fit their child's needs.
 - *Protections for freedom of speech* – Freedom of speech is the bedrock of democracy. This right allows us to express diverse ideas to ensure human flourishing.
- A Trust To Earn & Trade: The people of Virginia reserve a right to earn and keep the product of their labor and talents. Our government is trusted to preserve free and open trade between those who work within and beyond the commonwealth.
 - Legislative actions that support the trust to earn and trade:
 - *Red Tape Reduction Act* – Creating rules that unnecessarily increase the cost of person's business creates a system that is rigged against working people and undermines the trust between citizens and government. Lawmakers should reform the state regulatory regime to reduce as much cost and burden as possible while protecting competition and the free market.
 - *Occupational licensing reform* – The government violates the trust to earn and trade when it creates barriers that keep citizens from using their talents and skills to make a living. Lawmakers should reform state licensing laws to reduce or eliminate their burden on occupations unrelated to health and safety.
 - *Ban Stadium Subsidies* – Lawmakers can't be trusted with tax dollars if they give them to wealthy businesses. Putting taxpayers on the hook for stadiums that will benefit private sports teams and their wealthy owners.
- A Trust To Care & Serve: The trust to care and serve together requires a competitive healthcare market so individuals can freely choose the best services for themselves and their families and individual responsibility to care and earn for oneself.
 - Legislative actions that support the trust to care and serve:
 - *Saving Medicaid for Those Who Need It Most* – Expanding Medicaid to able-bodied, childless, working-age adults would create an unsustainable burden on taxpayers and crowd out resources intended for truly needy populations like the elderly and disabled. Virginia should not expand Medicaid but rather pursue supply-side reforms that increase the supply and quality and decrease the cost of healthcare.
 - *Rebuilding our criminal justice system* – A system in which sentencing is disproportionate to the impact of the offense upon society will undermine the trust of the government and deprives people of opportunity and prosperity after they have paid a reasonable debt to society.

TENTATIVE SCHEDULE

BUILDING THE TRUST IN VIRGINIA: DAY AT THE CAPITOL 2018

- **WELCOME:** Seminar Video and Ben Knotts, Grassroots Director
- **BUILDING TRUST FOR VIRGINIANS IN DC: 12:45 – 2:15pm**
 - Featuring:
 - *Tim Phillips, President of Americans for Prosperity*
 - *Congressman Dave Brat*
 - *Panel moderated by Tim Phillips, President of Americans for Prosperity*
 - *Mac Zimmerman, Director of Policy*
 - *Ken Cuccinelli, Attorney General of Virginia 2009-2013*
 - *Secretary of Interior Representative on behalf of Secretary Zinke*
- **BUILDING TRUST FOR VIRGINIANS IN RICHMOND: 2:25pm – 3:55pm**
 - Featuring:
 - *JC Hernandez, State Director (Policy Review)*
 - *Lauren Toomey, Deputy Director (Capabilities Review)*
 - *Panel moderated by Ben Knotts, Grassroots Director*
 - *Martha Boneta, Executive Vice President of Citizens for the Republic*
 - *Denver Riggleman, Owner Silverback Distillery*
 - *Delegate Michael Webert*
 - *Delegate Ben Cline*
 - *Delegate Nick Freitas*
 - *Senator Mark Obenshain (pending)*
 - *Senator David Suetterlein (pending)*
- **BUILDING TRUST FOR VIRGINIANS IN COMMUNITY BUILDING: 4:00 – 4:30pm**
 - Featuring:
 - *Clarissa Buckley, Outreach Director for Bridge to Well-being*
 - *Flint Engleman, Senior Field Director for GLA Education*
- **CALL TO ACTION:** *Ben Knotts, Grassroots Director*

To: Benjamin Knotts[BKnotts@afphq.org]
Cc: Wynn, Todd[todd_wynn@ios.doi.gov]
From: Jason Funes
Sent: 2018-02-02T11:25:05-05:00
Importance: Normal
Subject: Re: Confirmation for Lobby Day
Received: 2018-02-02T11:25:13-05:00

Also can you provide a copy of the agenda when it's available and the time when I'll be presenting? That would be extremely helpful.

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

On Feb 2, 2018, at 11:15 AM, Wynn, Todd <todd_wynn@ios.doi.gov> wrote:

Ben,
I think Jason sent you a confirmation. But figured Id connect the dots here to make sure.

Todd

On Wed, Jan 31, 2018 at 4:38 PM, Benjamin Knotts <BKnotts@afphq.org> wrote:

Hey Todd,

Going to send logistics but need to know if ya'll are solid. Thanks.

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia

804.221.5879 | bknotts@afphq.org | @AFPVA | www.thevirginiatrust.com

--

Todd M. Wynn

Director of the Office of Intergovernmental and External Affairs

Office of the Secretary

U.S. Department of the Interior

Desk: (202) 208-6649

Cell: (202) 897-7269

NOTE: Every email I send or receive is subject to release under the Freedom of Information Act.

To: Jason Funes[jason_funes@ios.doi.gov]
Cc: Wynn, Todd[todd_wynn@ios.doi.gov]
From: Benjamin Knotts
Sent: 2018-02-02T12:34:33-05:00
Importance: Normal
Subject: RE: Confirmation for Lobby Day
Received: 2018-02-02T12:36:24-05:00
[lobby day draft agenda \(AutoRecovered\).docx](#)

Just making ya'll saw this. Jason will present around 1:45. Thanks guys!!!

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA | www.thevirginiatrust.com

From: Jason Funes [mailto:jason_funes@ios.doi.gov]
Sent: Friday, February 02, 2018 11:25 AM
To: Benjamin Knotts <BKnotts@afphq.org>
Cc: Wynn, Todd <todd_wynn@ios.doi.gov>
Subject: Re: Confirmation for Lobby Day

Also can you provide a copy of the agenda when it's available and the time when I'll be presenting?
That would be extremely helpful.

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

On Feb 2, 2018, at 11:15 AM, Wynn, Todd <todd_wynn@ios.doi.gov> wrote:

Ben,

I think Jason sent you a confirmation. But figured Id connect the dots here to make sure.

Todd

On Wed, Jan 31, 2018 at 4:38 PM, Benjamin Knotts <BKnotts@afphq.org> wrote:
Hey Todd,

Going to send logistics but need to know if ya'll are solid. Thanks.

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
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--

Todd M. Wynn
Director of the Office of Intergovernmental and External Affairs
Office of the Secretary
U.S. Department of the Interior
Desk: (202) 208-6649
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LOBBY DAY 2018 | 2.5.2017 | 12:45 – 5:00 PM EST

919 East Main Street | Suntrust Building – 4TH FLOOR | Richmond, VA

Point of Contact: Grassroots Director, Benjamin Knotts | 804.221.5879 | bknotts@afphq.org

Thank you so much for joining us at the “Trust Virginians Lobby Day!” Below are instructions, a line by line, and talking points for the event. Please let me know if you have additional questions.

Please arrive at least 10-15 minutes before you are scheduled to speak to check in with Ben Knotts. If you are running late or have a last minute schedule request, please contact Ben so he can adjust the schedule accordingly.

As a reminder, Americans for Prosperity is a grassroots free market advocacy group that does not endorse or coordinate with candidates or parties. Please ensure your comments stay focused on the free market policies we are advocating for and how they will benefit Virginia – and avoid any comments or references to candidates, elections or parties. All comments about an election, candidates or political parties are not compliant with our purpose. Any references to an individual lawmaker should be in reference to their support or opposition to free-market policies. By keeping your comments focused on our shared policy goals, you help ensure Americans for Prosperity can keep fighting for free market policy in Virginia for years to come.

If you have a brief biography you want read or a specific introduction – please forward that to bknotts@afphq.org with the subject line “Lobby Day Intro for (speaker’s name).”

The Virginia Trust

The ideas enshrined in Virginia's constitution convey an essential relationship between citizens and the government they form — a trust. The people of Virginia trust each other and their elected officials to preserve a free society that maximizes peace and well-being by first acting with integrity, respect, responsibility and toleration. In turn, officials must trust the citizenry and properly limit the role of government in society. When lawmakers and citizens work together to preserve this alliance, people are empowered to learn, earn and care for themselves. This is called The Virginia Trust.

- A Trust To Teach & Learn: There is trust between the government and citizens of Virginia to protect an individual's right to freely speak, teach and learn.
 - Legislative actions that support the trust to teach and learn:
 - *Education Savings Accounts* – ESAs enable families and students in Virginia to freely pursue educational opportunities that best fit their child's needs.
 - *Protections for freedom of speech* – Freedom of speech is the bedrock of democracy. This right allows us to express diverse ideas to ensure human flourishing.
- A Trust To Earn & Trade: The people of Virginia reserve a right to earn and keep the product of their labor and talents. Our government is trusted to preserve free and open trade between those who work within and beyond the commonwealth.
 - Legislative actions that support the trust to earn and trade:
 - *Red Tape Reduction Act* – Creating rules that unnecessarily increase the cost of person's business creates a system that is rigged against working people and undermines the trust between citizens and government. Lawmakers should reform the state regulatory regime to reduce as much cost and burden as possible while protecting competition and the free market.
 - *Occupational licensing reform* – The government violates the trust to earn and trade when it creates barriers that keep citizens from using their talents and skills to make a living. Lawmakers should reform state licensing laws to reduce or eliminate their burden on occupations unrelated to health and safety.
 - *Ban Stadium Subsidies* – Lawmakers can't be trusted with tax dollars if they give them to wealthy businesses. Putting taxpayers on the hook for stadiums that will benefit private sports teams and their wealthy owners.
- A Trust To Care & Serve: The trust to care and serve together requires a competitive healthcare market so individuals can freely choose the best services for themselves and their families and individual responsibility to care and earn for oneself.
 - Legislative actions that support the trust to care and serve:
 - *Saving Medicaid for Those Who Need It Most* – Expanding Medicaid to able-bodied, childless, working-age adults would create an unsustainable burden on taxpayers and crowd out resources intended for truly needy populations like the elderly and disabled. Virginia should not expand Medicaid but rather pursue supply-side reforms that increase the supply and quality and decrease the cost of healthcare.
 - *Rebuilding our criminal justice system* – A system in which sentencing is disproportionate to the impact of the offense upon society will undermine the trust of the government and deprives people of opportunity and prosperity after they have paid a reasonable debt to society.

TENTATIVE SCHEDULE

BUILDING THE TRUST IN VIRGINIA: DAY AT THE CAPITOL 2018

- **WELCOME:** Seminar Video and Ben Knotts, Grassroots Director
- **BUILDING TRUST FOR VIRGINIANS IN DC: 12:45 – 2:15pm**
 - Featuring:
 - *Tim Phillips, President of Americans for Prosperity*
 - *Congressman Dave Brat*
 - *Panel moderated by Tim Phillips, President of Americans for Prosperity*
 - *Mac Zimmerman, Director of Policy*
 - *Ken Cuccinelli, Attorney General of Virginia 2009-2013*
 - *Secretary of Interior Representative on behalf of Secretary Zinke*
- **BUILDING TRUST FOR VIRGINIANS IN RICHMOND: 2:25pm – 3:55pm**
 - Featuring:
 - *JC Hernandez, State Director (Policy Review)*
 - *Lauren Toomey, Deputy Director (Capabilities Review)*
 - *Panel moderated by Ben Knotts, Grassroots Director*
 - *Martha Boneta, Executive Vice President of Citizens for the Republic*
 - *Denver Riggleman, Owner Silverback Distillery*
 - *Delegate Michael Webert*
 - *Delegate Ben Cline*
 - *Delegate Nick Freitas*
 - *Senator Mark Obenshain (pending)*
 - *Senator David Suetterlein (pending)*
- **BUILDING TRUST FOR VIRGINIANS IN COMMUNITY BUILDING: 4:00 – 4:30pm**
 - Featuring:
 - *Clarissa Buckley, Outreach Director for Bridge to Well-being*
 - *Flint Engleman, Senior Field Director for GLA Education*
- **CALL TO ACTION:** Ben Knotts, Grassroots Director

To: Mac Zimmerman[mzimmerman@afphq.org]; Chrissy Harbin[charbin@afphq.org]
From: Funes, Jason
Sent: 2018-02-02T12:53:11-05:00
Importance: Normal
Subject: Mac's Phone Number
Received: 2018-02-02T12:54:33-05:00

Hey Mac,

We are extremely excited to work with you and was urgently wanting to speak to you.

Can you send me your phone number so I can give you a call?

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541
Cell: (202) [REDACTED] (b)(6)

To: Funes, Jason[jason_funes@ios.doi.gov]
Cc: Chrissy Harbin[CHarbin@afphq.org]
From: Mac Zimmerman
Sent: 2018-02-02T13:01:40-05:00
Importance: Normal
Subject: Re: Mac's Phone Number
Received: 2018-02-02T13:02:09-05:00

Sure. In at a lunch now but should be out in about an hour.

(b)(5)

On Feb 2, 2018, at 12:53 PM, Funes, Jason <jason_funes@ios.doi.gov> wrote:

Hey Mac,

We are extremely excited to work with you and was urgently wanting to speak to you.

Can you send me your phone number so I can give you a call?

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541
Cell: (202) (b)(5)

To: Mac Zimmerman[MZimmerman@afphq.org]
Cc: Chrissy Harbin[CHarbin@afphq.org]
From: Jason Funes
Sent: 2018-02-02T13:18:29-05:00
Importance: Normal
Subject: Re: Mac's Phone Number
Received: 2018-02-02T13:18:59-05:00

I'll reach out to you at 2pm, or call my cell when you can.

202 [REDACTED] (b)(6)

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

On Feb 2, 2018, at 1:01 PM, Mac Zimmerman <MZimmerman@afphq.org> wrote:

Sure. In at a lunch now but should be out in about an hour.

7206332889

On Feb 2, 2018, at 12:53 PM, Funes, Jason <jason_funes@ios.doi.gov> wrote:

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Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541
Cell: (202) [REDACTED] (b)(6)

To: achougule@afphq.org[achougule@afphq.org]; Chrissy Harbin[charbin@afphq.org]
From: Funes, Jason
Sent: 2018-02-02T13:32:29-05:00
Importance: Normal
Subject: Phone Number Request
Received: 2018-02-02T13:33:06-05:00

Hey Akash,

I'm very excited to work with you and despite Chrissy leaving AFP, I know we will continue to work together with AFP to support our conservative work across the country!

Akash, I wanted to speak to you preferably over the phone. Can you call me or give me your contact #?

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541
Cell: (202) [REDACTED] (b)(6)

To: Jason Funes[jason_funes@ios.doi.gov]
Cc: Chrissy Harbin[CHarbin@afphq.org]
From: Mac Zimmerman
Sent: 2018-02-02T13:34:49-05:00
Importance: Normal
Subject: Re: Mac's Phone Number
Received: 2018-02-02T13:34:59-05:00

Thanks. Will do.

On Feb 2, 2018, at 1:18 PM, Jason Funes <jason_funes@ios.doi.gov> wrote:

I'll reach out to you at 2pm, or call my cell when you can.

202 [redacted] (b)(6)

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

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Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541

Cell: (202) [REDACTED] (b)(6)

To: Mac Zimmerman[MZimmerman@afphq.org]
Cc: Chrissy Harbin[CHarbin@afphq.org]
From: Funes, Jason
Sent: 2018-02-02T14:14:23-05:00
Importance: Normal
Subject: Re: Mac's Phone Number
Received: 2018-02-02T14:15:00-05:00

I didn't get through and didn't get a voice mail.
Call me back when you can. Thanks

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541

On Fri, Feb 2, 2018 at 1:34 PM, Mac Zimmerman <MZimmerman@afphq.org> wrote:

Thanks. Will do.

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202 [(b)(6)]

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Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

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urgently wanting to speak to you.

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Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541
Cell: (202) [REDACTED] (b)(6)

To: Funes, Jason[jason_funes@ios.doi.gov]; Chrissy Harbin[CHarbin@afphq.org]
From: Akash Chougule
Sent: 2018-02-02T20:08:04-05:00
Importance: Normal
Subject: RE: Phone Number Request
Received: 2018-02-02T20:08:23-05:00

Thanks Jason – I am traveling most of next week. How does the following week look for a call?

Akash Chougule | Director of Policy | Americans for Prosperity – HQ
m: 202.731.3086 | e: achougule@afphq.org
@AkashJC | @AFPhq | www.facebook.com/fightback

From: Funes, Jason [mailto:jason_funes@ios.doi.gov]
Sent: Friday, February 02, 2018 1:32 PM
To: Akash Chougule <AChougule@afphq.org>; Chrissy Harbin <CHarbin@afphq.org>
Subject: Phone Number Request

Hey Akash,

I'm very excited to work with you and despite Chrissy leaving AFP, I know we will continue to work together with AFP to support our conservative work across the country!

Akash, I wanted to speak to you preferably over the phone. Can you call me or give me your contact #?

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541
Cell: (202) (b)(6)

To: BKnotts@afphq.org[BKnotts@afphq.org]; Derrick Hollie[dhollie@reachingamerica.org]
From: Jason Funes
Sent: 2018-02-03T09:07:05:00
Importance: Normal
Subject: Power House Supporter From Virginia
Received: 2018-02-03T09:07:09-05:00

Hey Ben,

I wanted to be sure to connect you with one of the greatest voices and personalities on issues that align with AFP's perspectives, Mr. Derrick Hollie, President of Reaching America (<http://reachingamerica.org/>) who is a native son of Virginia.

I'm not sure if there is still an opportunity for folks to sign up for Monday's event, but I believe there could be an excellent partnership between your two organizations, especially when it comes to energy related issues, criminal justice reform, occupational licensing reform, and free speech.

I spoke to Chrissy about having AFP Virginia work with Derrick and she thought it would be a great idea.

I hope that you two can speak before Monday.

Together we can help Make Virginia Great Again!

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

To: MZimmerman@afphq.org[MZimmerman@afphq.org];
achougule@afphq.org[achougule@afphq.org]

From: Jason Funes

Sent: 2018-02-03T11:10:59-05:00

Importance: Normal

Subject: Fwd: Research Of Valuable Use

Received: 2018-02-03T11:11:11-05:00

ATT00001.htm

Impacts of Restricting Fossil Fuels - Keep It In The Ground Report.pdf

Minority and Female Employment (One Pager)- 2015 to 2035.pdf

ATT00002.htm

Veterans and Energy (1 Pager).pdf

ATT00003.htm

Energy Works - 6 Pager on Jobs and Economic Impact.pdf

ATT00004.htm

Millennial Report - OnePager 2018.pdf

ATT00005.htm

National Factsheet (1 page).pdf

ATT00006.htm

Mac & Akash,

Below is some information that I shared with Chrissy a few weeks ago and I wanted to be sure you had this information readily at your disposal.

Also below is the link with the updated BOEM schedule for the "town hall" style meetings:

<https://www.boem.gov/National-Program-Participate/>

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

Begin forwarded message:

From: "Funes, Jason" <jason_funes@ios.doi.gov>
To: Chrissy Harbin <charbin@afphq.org>
Subject: Fwd: Research Of Valuable Use

Hey Chrissy,

I wanted to follow up with you regarding some data/research regarding the economic impact of the energy industry both onshore and offshore.

I realize there are other organizations other than API that may publish work regarding

this information, but as I browsed their website, this information seemed to stand out. I encourage you to use this or any other valid information regarding the economic impact the energy industry has here in the U.S. Also see the attached documents that are quite insightful.

2014's information that is still pertinent (bullet points):

<http://www.api.org/oil-and-natural-gas/wells-to-consumer/exploration-and-production/offshore/benefits-of-us-offshore-oil-and-natural>

<http://www.api.org/news-policy-and-issues/american-jobs/oil-gas-stimulate-american-jobs>

Thanks,

**Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541**

America's Oil and Natural Gas Industry

ENERGY WORKS

For America



OUR ENERGY FOUNDATION

The United States is the world's leading producer of oil and natural gas, and as a result of greater use of clean-burning natural gas and cleaner, more efficient fuels, we are also a world leader in reducing carbon emissions and other air pollutants. We have a proven model for achieving environmental progress without sacrificing jobs, economic growth, energy security or consumer affordability. Our political leadership has the opportunity to continue, and expand upon, the American energy revolution.

In the past decade alone, technological advances in oil and natural gas production have ushered in a new era. American crude oil production jumped 88 percent between 2008 and 2015, and natural gas production increased 48 percent since 2005. The turnaround has helped reduce gasoline prices, fuel imports, and heating and electricity costs for households and businesses, while at the same time cutting carbon emissions from energy to near 20-year lows. Technological improvements are not just limited to production; between 1990 and 2014, U.S. refiners spent \$154.4 billion on

environmental improvements—helping contribute to cleaner air. These technological advances have moved us from an era of energy scarcity to one of energy abundance in a few short years. Washington can make energy policy choices that will continue our national progress, such as:

- » Implementing policies that recognize our energy reality, both today and tomorrow, and are based on sound science and economics.
- » Embracing our new era of American energy abundance and protecting the progress made, avoiding a return to decades of insecurity and scarcity.
- » Seizing the career opportunities that the oil and gas sector provide to a diverse American labor force with the potential to break the cycle of generational poverty.
- » Insisting our government regulatory systems perform their duty of protecting the public in a timely and efficient manner; avoiding unnecessary, duplicative rules that place undue burdens on energy development and distribution.
- » Recognizing the best way to achieve our energy and environmental goals is not with government mandates, but through private innovation and investment, in cooperation with governments at all levels.

American energy is working and the goal of a national energy policy must be to ensure a secure supply of abundant, affordable, and available energy for the American people in an environmentally responsible manner.

September 2016

For the latest report, please visit www.api.org and www.ozonefacts.com



CAREER OPPORTUNITIES FOR WOMEN AND MINORITIES

Based on federal data, the average annual pay in the oil and natural gas industry is more than \$100,000 – nearly \$50,000 higher than the 2014 U.S. average. That's good news, and the even better news is that the oil and natural gas industry is projected to have significant job gains for women, African Americans and Hispanics between now and 2035 according to a [2016 report by consulting firm IHS](#), which projects significant job gains for women, African Americans and Hispanics between now and 2035. Here are some of the principle findings: Nearly 1.3 million job opportunities by 2025 and close to 1.9 million job opportunities by 2035 will be in the oil & natural gas and petrochemical industries considering all types of job growth.

- » 707,000 jobs, or 38% of the total, are projected to be filled by African American and Hispanic workers through 2035. (131,000 for African Americans and 576,000 for Hispanics).
- » Women in the industry are projected to account for more than 290,000 of the job opportunities, 16% of the total through 2035.

"The magnitude of these opportunities speaks to the continuing importance of the oil and natural gas and petrochemical industries in the U.S. economy as a whole as well as to individuals and families looking for well-paying career opportunities.

As seen in this report, minority communities and women represent critically vital and available talent pools to help meet the industry's future workforce demands." —IHS

OPPORTUNITIES FOR MINORITIES

The share of minorities employed in the oil & natural gas and petrochemicals industries is rising: Minority employment will rise from about one-quarter of the total in 2015 to more than one-third (36%) in 2035.

African American and Hispanic workers are projected to make up over one-fourth of the new hires in management, business, and financial jobs in the industry through 2035.

Meaningful career opportunities also exist in the industry for other minority groups, such as Native Americans and Asian Americans. For example, in 2011 an estimated 20% of known U.S. oil and natural gas reserves were beneath tribal lands, with the Department of the Interior estimating that Indian lands could produce up to 5.35 billion barrels of oil and 37.7 trillion cubic feet of natural gas.

OPPORTUNITIES FOR WOMEN

There are already more than 237,000 women working in the oil & natural gas and petrochemical industries. Nearly half of those women (over 114,000) work in management and professional occupations.

IHS projects continued opportunity for women in management and professional fields, with women accounting for 154,000 of these job opportunities through 2035.

Much of the job growth is projected to occur in blue collar professions. There is significant potential for female blue collar employment if interest and training are directed toward women to increase female participation in those areas.

OPPORTUNITIES BY OCCUPATION

Fifty-seven percent of the job opportunities through 2035 are projected to be in blue collar occupations. This suggests tremendous opportunity for workers with a high school diploma and some post-secondary training (e.g., certificates and community college).

One-third of the job opportunities are projected to be in management and professional fields such as engineering, geoscience, management, finance, and as technicians. African Americans, Hispanics, and women who successfully complete college degrees in these fields would be highly competitive for workforce placement.



AMERICA'S OFFSHORE OPPORTUNITY

America's vast offshore energy reserves present an opportunity to improve our economy, increase our energy security and create tens of thousands of jobs. Opening the U.S. Atlantic Outer Continental Shelf (OCS) alone to offshore oil and natural gas development could create nearly 280,000 new jobs along the East Coast and across the country, as well as result in an additional \$195 billion in new private investment and contribute billions per year to the U.S. economy.

Oil and natural gas production off our Atlantic coast is a potential gold mine. Developing oil and natural gas in the Atlantic could put hundreds of thousands of Americans to work, make us more energy secure and bring in needed revenue for the government. But none of these benefits will appear unless the federal government follows pro-development energy policies.



In January 2015, the Obama administration proposed a limited offshore leasing program to develop resources in the Gulf of Mexico, off the coast of Alaska and along the Atlantic OCS. Americans stand to benefit if the Atlantic and other offshore areas that have been kept off-limits are included in the next five-year leasing program.

"NORTH CAROLINA HAS ABUNDANT OFFSHORE ENERGY RESOURCES THAT HAVE THE POTENTIAL TO CREATE THOUSANDS OF JOBS, PRODUCE MUCH-NEEDED REVENUE AND MOVE US CLOSER TO ENERGY INDEPENDENCE."

— Governor Pat McCrory



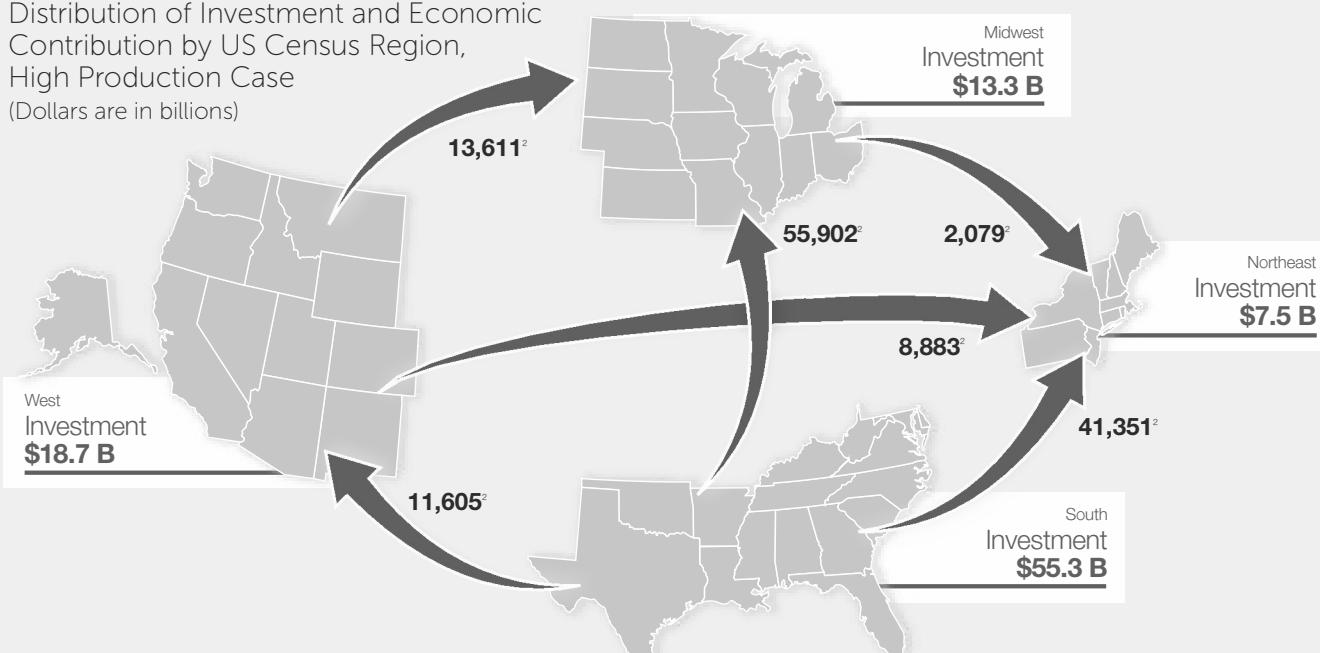
OPPORTUNITIES IN INFRASTRUCTURE

America's energy infrastructure system is critical to the efficient movement of crude oil and natural gas to refineries and to businesses and consumers as end customers. Keeping that infrastructure current for today's energy realities will be among the energy choices facing policymakers in 2014 and beyond. Surging production in the Northeastern U.S., remote locations like the Bakken region and the Canadian oil sands require not only expanded transportation capacity but a wholesale redesign of the energy infrastructure network.

Relative to today's production realities, the existing energy transportation system is virtually upside down, and righting it will eliminate costly inefficiencies as well as generate substantial economic growth.

Updating infrastructure to our new energy reality could, per an IHS study, generate an estimated \$1.15 trillion in capital investments between 2014 and 2025. These investments in midstream and downstream infrastructure — including pipelines, storage, processing, rail, and marine components — will ripple through the U.S. economy creating jobs, increasing GDP and labor income, and boosting tax revenue to federal, state, and local governments. Midstream and downstream infrastructure investment could support as many as an estimated 1.15 million jobs on an average annual basis over the 2014-2025 period, adding up to \$120 billion on average per year to the economy and generating up to \$27.5 billion in average annual revenue to the government. Pipeline investment alone could support up to 830,769 jobs on an average annual basis over the 2014-2025 period.

Distribution of Investment and Economic Contribution by US Census Region,
High Production Case
(Dollars are in billions)



SOURCE: IHS, "Oil & Natural Gas Transportation & Storage Infrastructure: Status, Trends, & Economic Benefits," December 2013

¹ The phrase "Jobs originating in this region" is shorthand for "U.S. jobs supported as a result of direct capital investment made in this U.S. Census Region"

² Each arrow shows the net redistribution of jobs between two regions

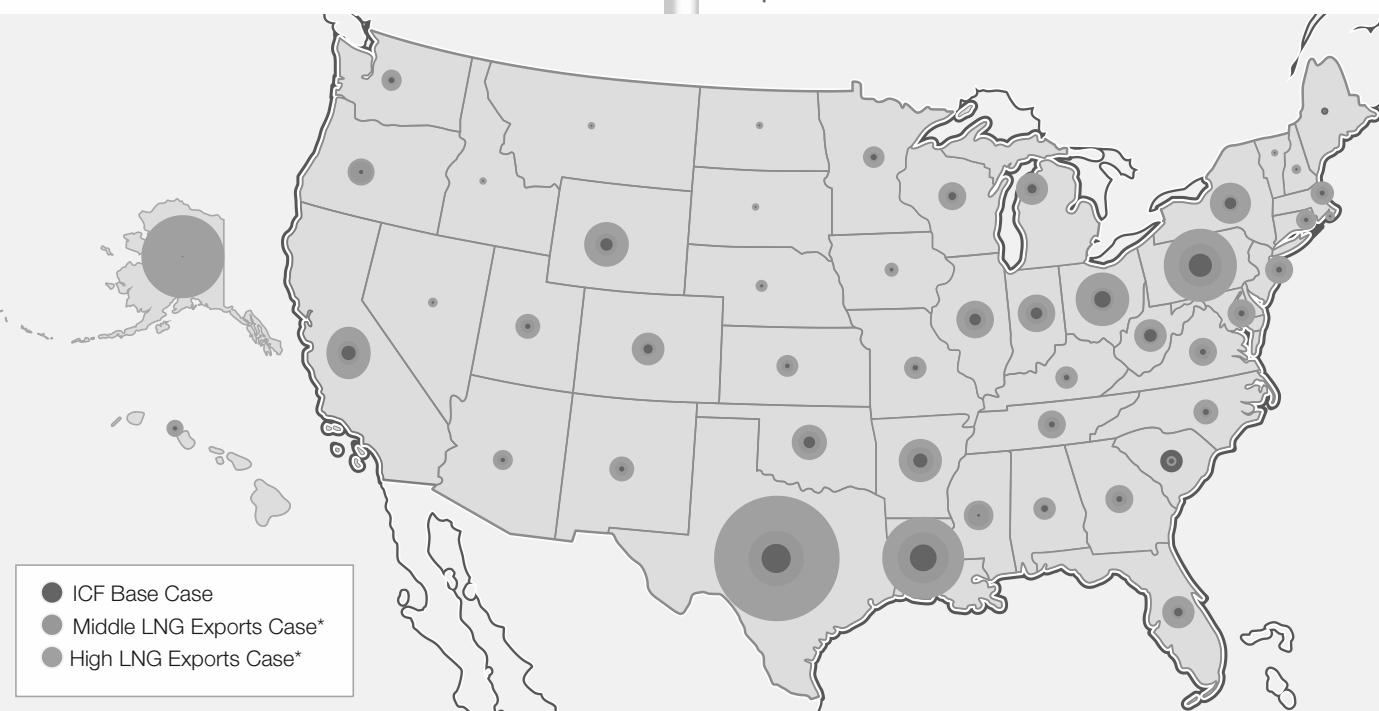


OPPORTUNITY IN TRADE

America is in the midst of an energy revolution and for American workers, the best is yet to come. The export of liquefied natural gas — or LNG — represents one of the most promising economic opportunities of the shale revolution. These exports will significantly reduce our trade deficit, increase government revenues, grow the economy, and support millions of U.S. jobs in engineering, manufacturing, construction, and facility operations. The opportunities associated with LNG exports will extend beyond natural gas-producing states, and the economic impacts could be substantial in many areas. According to ICF, by 2035:

- » LNG exports could contribute as much as \$10 to \$31 billion per state to the economies of natural gasproducing states.
- » Other states will also benefit, partly due to the boost in demand for steel, cement, equipment, and other goods. States with a large manufacturing base, such as Ohio, California, New York, and Illinois, will see economic gains as high as \$2.6 to \$5.0 billion per state.
- » Natural gas-producing states could see employment gains as high as 60,000 to 155,000 jobs; and large manufacturing states, such as California and Ohio, could see employment gains of up to 30,000 to 38,000 jobs in 2035.
- » There could also be significant job growth in states where LNG export terminals could be built. For example, in a high export scenario, in which an Alaska-based terminal is built, Alaska could see up to a \$10 billion addition to state income and over 36,000 added jobs resulting from LNG exports.

America is in a global race to build this infrastructure and secure a competitive position in the international market. More than 60 international LNG export projects are currently planned or under construction around the world, and those nations that act quickly to attract these investments will reap the economic rewards. Fortunately, U.S. workers are in a very good position to win that race.





WHAT THEY ARE SAYING

RAHM EMANUEL, CHICAGO MAYOR

"Cheap energy—the revolution that's going on in America's heartland on energy—is making sure that America now has a manufacturing renaissance."

VIRG BERNERO, MAYOR OF LANSING, MICHIGAN

"We're all aware of the incredible impact the energy revolution is having on our national economy. The growing competitiveness and increase in employment from these manufacturing sectors are important to our cities and metro economies."

SARA HIGGINS, CITY OF MIDLAND, TEXAS

"Right now our economy is booming due to the increased oil and gas activity here in town. We have great business opportunities here in Midland."

JOHN H. THOMPSON, DIRECTOR, U.S. CENSUS BUREAU

"Mining, quarrying, and oil and gas extraction industries were the most rapidly growing part of our nation's economy over the last several years."

JIM FITTERLING, DOW CHEMICAL, TALKING ABOUT THE IMPACT OF NEW PETROCHEMICAL INVESTMENT

"This validates everything we've been trying to say about the potential of energy resources to recharge the U.S. economy. It's coming and it's real and it will have an impact."

JERRY ZEIDERS, PLANT MANAGER FOR GARDNER DENVER (PA), which makes and fixes pumps used in the Marcellus Shale

"We will be adding more jobs this year ... We are going to continue to grow. We have just scratched the surface of the things we can do in the Northeast."

BETSEY HALE, LOVELAND COLORADO ECONOMIC DEVELOPMENT DIRECTOR

"It's not always the job on the rig or the well. There's a whole host of jobs other than the guy who's actually fracking. ... A lot of people who were out of work during the recession are now working because of oil and gas, and energy in general."

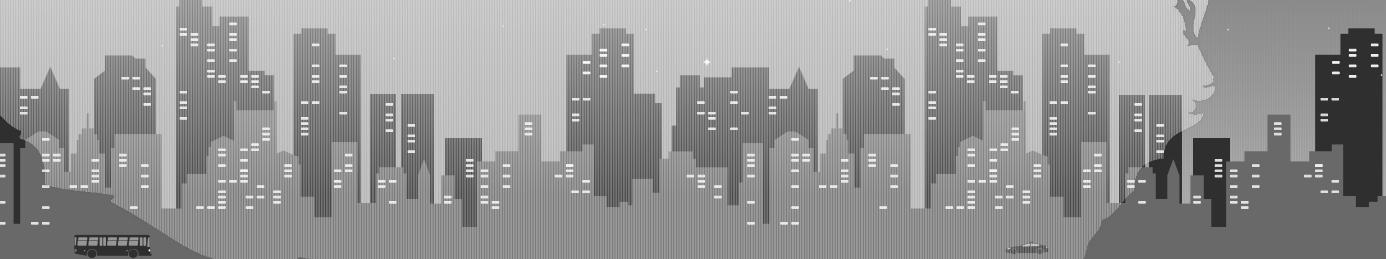
ROLAND MOWER, CEO, CORPUS CHRISTI (TEXAS) REGIONAL ECONOMIC DEVELOPMENT CORP.

"This region is experiencing an uptick in interest from international manufacturers interested in leveraging our low-cost, politically stable supply of natural gas as a fuel source for their manufacturing processes and our immediate proximity to the U.S. (Western Hemisphere) markets."

NATURAL GAS AND OIL

A CRITICAL CONTRIBUTOR TO AMERICAN PROSPERITY

The natural gas and oil industry is a critical part of the U.S. economy. In 2015, these energy resources supported 10.3 million jobs and contributed more than \$1.3 trillion to the U.S. economy.



JOBSS
10.3M

LABOR INCOME
\$714B

ECONOMIC BENEFIT
\$1.3T

7.6%
U.S. GDP

TOTAL NATURAL GAS AND OIL INDUSTRY BENEFIT TO U.S. COMMUNITIES



The total employment impact is a trusted indicator of an industry's effect on economic growth. The natural gas and oil industry is a serious contributor, supporting 10.3 million full- and part-time jobs through direct employment and indirect support to other sectors in 2015. Research shows that for every direct natural gas and oil job, an additional 2.7 jobs are supported elsewhere in the economy. These jobs make up **5.6 PERCENT OF THE NATION'S TOTAL EMPLOYMENT.**



In addition to well-paying jobs, the industry supported an estimated \$1.3 trillion dollars of the U.S. economy in 2015. That is **7.6 PERCENT OF U.S. GDP.** This economic impact is a result of wages, taxes, capital investments and support to other industries. These benefits extend far beyond traditional natural gas and oil producing states. Recent research shows measurable **ECONOMIC BENEFITS IN ALL 50 STATES AND THE DISTRICT OF COLUMBIA.**

NATURAL GAS AND OIL ECONOMIC GROWTH BETWEEN 2011 - 2015

↑ 5.2%

ADDITIONAL
JOBS SUPPORTED

↑ 19.5%

ADDITIONAL
LABOR INCOME

↑ 9.0%

ADDITIONAL
ECONOMIC BENEFIT



MINORITY AND FEMALE EMPLOYMENT

IN THE OIL & NATURAL GAS AND PETROCHEMICAL INDUSTRIES, 2015–2035

KEY FINDINGS

Continuing a series of research studies, a new IHS report titled *Minority and Female Employment in the Oil & Natural Gas and Petrochemical Industries, 2015–2035* examines the long-term U.S. demographic and labor market trends that will create future job opportunities for minorities and women in the oil & natural gas and petrochemical industries. This comprehensive study presents projections of job opportunities by occupation, industry segment, minority group, and gender based on baseline industry growth and investment, jobs arising from pro-development policies, and the need to replace workers retiring from the industry. These employment projections should not be considered ceilings, but are estimates based on current and projected trends in factors such as labor force participation rates and population growth rates.

The principal findings of the new IHS report include:

- Nearly **1.3 million job opportunities** by 2025 and **close to 1.9 million job opportunities** by 2035 in the oil & natural gas and petrochemical industries considering all types of job growth.
- **707,000 jobs**, or 38% of the total, are projected to be filled by **African American and Hispanic workers** through 2035. (131,000 for African Americans and 576,000 for Hispanics).
- **Women** in the industry are projected to account for **more than 290,000 of the job opportunities**, 16% of the total through 2035.

THE NEARLY 1.9 MILLION DIRECT JOB OPPORTUNITIES PROJECTED THROUGH 2035 IN THE OIL & NATURAL GAS AND PETROCHEMICAL INDUSTRIES SPEAK TO THE CONTINUING IMPORTANCE OF THESE INDUSTRIES IN THE U.S. ECONOMY AS A WHOLE AND TO INDIVIDUALS AND FAMILIES LOOKING FOR WELL-PAYING CAREER OPPORTUNITIES.

IN FACT, BASED ON AVERAGE ANNUAL WAGE DATA FROM THE BUREAU OF LABOR STATISTICS, THE AVERAGE ANNUAL PAY IN THE OIL AND NATURAL GAS INDUSTRY IS OVER \$100,000, NEARLY \$50,000 HIGHER THAN THE 2014 U.S. AVERAGE.



OPPORTUNITIES FOR MINORITIES

- The share of minorities employed in the oil & natural gas and petrochemicals industries is rising: Minority employment will rise from about one-quarter of the total in 2015 to **more than one-third (36%) in 2035**.
- **African American and Hispanic workers** are projected to make up **over one-fourth** of the new hires in management, business, and financial jobs in the industry through 2035.
- Meaningful career opportunities also exist in the industry for other minority groups, such as Native Americans and Asian Americans. For example, in 2011 an estimated 20% of known U.S. oil and natural gas reserves were beneath tribal lands, with the Department of the Interior estimating that Indian lands could produce up to 5.35 billion barrels of oil and 37.7 trillion cubic feet of natural gas.

OPPORTUNITIES FOR WOMEN

There are already **more than 237,000 women working in the oil & natural gas and petrochemical industries**. Nearly half of those women (over 114,000) work in management and professional occupations.

- IHS projects continued opportunity for women in management and professional fields, with women accounting for 154,000 of these job opportunities through 2035.
- Much of the job growth is projected to occur in blue collar professions. There is significant potential for female blue collar employment if interest and training are directed toward women to increase female participation in those areas.

OPPORTUNITIES BY OCCUPATION

- **Fifty-seven percent of the job opportunities through 2035 are projected to be in blue collar occupations.** This suggests tremendous opportunity for workers with a high school diploma and some post-secondary training (e.g., certificates and community college).
- **One-third of the job opportunities are projected to be in management and professional fields** such as engineering, geoscience, management, finance, and as technicians. African Americans, Hispanics, and women who successfully complete college degrees in these fields would be highly competitive for workforce placement.

This study is part of a series of work developing strategies, research, and programs to better understand the challenges and opportunities associated with engaging and growing high impact strategic partnerships. **Minority workers and women represent critically vital and available talent pools to help meet the industry's future workforce demands.** Workforce training is key to this projected growth. In order for minority workers and women to be competitive for the 1.9 million job opportunities it will require:

- Significant improvement in minority and female participation in Science, Technology, Engineering and Mathematics (STEM) related disciplines at the primary and secondary school levels;
- Significant improvement in high school completion rates for Hispanics and African Americans;
- Secondary and post-secondary staff (e.g., principals, faculty, counselors) being trained to inform their students on the workforce opportunities in the industry and the training required;
- Partnerships between higher education and industry, especially at the community college level.



MILLENNIALS

IN THE OIL & NATURAL GAS AND PETROCHEMICAL INDUSTRIES

With nearly 1.9 million job opportunities projected in the oil & natural gas and petrochemical industries through 2035, there is a vast opportunity for the industry to attract, retain, and develop lifelong careers for Millennials. Millennials today have unique characteristics that will enable them to power past impossible. By harnessing this generation's unshakable confidence in a better future and use of technology, the industry is positioned well to address tomorrow's greatest challenges.

Millennials already account for more than one-third of today's workforce in the oil and natural gas industry.

GENERATION ATTRIBUTES

Millennials as a group are more diverse and better educated than previous generations, providing an opportunity for our industry to tap a broader set of skills and more diverse intellect, creativity and perspectives than ever before, which will strengthen our industry now and into the future.

Compared to Baby Boomers and Gen-Xers, Millennials are:

- **More diverse**—45% of Millennials in 2016 were Hispanic, African American or from some other minority group, compared to one-third of Gen-Xers and 22% of Baby Boomers at a corresponding age.
- **Better educated**—About 66% of Millennials age 25-34 in 2016 have had at least some college coursework, compared with 56% of Gen-Xers at a corresponding age and 45% of Baby Boomers.
- **More likely to be in professional, technical, and service occupations**—Nearly 50% of working Millennials are employed in professional, technical, and service occupations compared to 33% of Gen-Xers and 30% of Baby Boomers at the same age.

The oil & natural gas and petrochemical industries must employ the next generations' best and the brightest and harness their potential. Only then can we meet the challenges we will undoubtedly face and create tomorrow's innovations that will allow our nation to power past what we consider impossible today.

MILLENNIALS IN THE INDUSTRY¹

- Millennials account for **34% of total industry employment**, nearly identical to Millennials' 35% share in the overall U.S. economy in 2015. This shows that Millennials are choosing to work for the oil & natural gas and petrochemical industries at the same rate as other industries.
- Millennials' share of employment is highest in blue collar occupations within the oil & natural gas and petrochemical industries, despite a national trend of this generation shifting away from blue collar jobs. Millennials account for **46% of all industry employment in unskilled blue collar occupations and 42% in semi-skilled blue collar occupations**.

Millennials are defined as those born in 1981-2000 (and immigrants of corresponding ages). Thus, in 2015 Millennials in the workforce of ages 18-34 are those born in 1981-1997.





- **Millennials will be nearly 41% of our workforce – a 20 percent increase – by 2025.** As they complete their educations and move fully into the workforce, Millennials will account for most of the rising replacement requirements in the oil & natural gas and petrochemical industries.
- The share of Millennials in managerial, business and financial occupations and in professional and related occupations **will increase to 39% by 2025.**

A REAL LIFE IMPACT FOR MILLENNIALS

The nearly 1.9 million direct job opportunities projected through 2035 in the oil & natural gas and petrochemical industries speak to the continuing importance of these industries in the U.S. economy, and to individuals and families looking for lifelong, well-paying career opportunities. In fact, based on average annual wage data from the Bureau of Labor Statistics, **the average annual pay in the oil and gas industry is nearly \$50,000 higher** than the 2016 U.S. average, and those with STEM skills earn the most.²

A significant number of the oil and natural gas industry positions that Millennials will be needed to fill require strong skills in the STEM disciplines across all education levels. In fact, **holding a STEM bachelor's degree nearly doubles the likelihood of working in the oil and natural gas industry**, and earning a degree in an industry-specific or -related field increases the likelihood of working in the industry by three to seven times. Increasing the number of Millennials who earn these types of degrees will provide these industries, and others, more opportunities to hire workers of this generation.



¹ The estimates and projections of Millennial employment in the oil and natural gas industry presented here were developed to be consistent with estimates for 2015 and baseline employment projections in a March 2016 report prepared by IHS Markit for the American Petroleum Institute, Minority and Female Employment in the Oil & Natural Gas and Petrochemical Industries, 2015-2035.

² RAND Corporation, "Postsecondary Education and STEM Employment in the United States: An Analysis of National Trends With a Focus on the Oil and Natural Gas Industry," November 2017.

THE IMPACTS OF RESTRICTING FOSSIL FUEL ENERGY PRODUCTION



PREPARED BY **ONLOCATION, INC.**
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Key Findings

Based on the models used, a U.S. policy of “keep it in the ground” is projected to generate the following impacts relative to a reference case similar to EIA’s Annual Energy Outlook 2016 Reference Case. The keep it in the ground scenario includes no new oil and natural gas leases on private, State or federal lands, a ban on hydraulic fracturing, no new or expansions of existing coal mines, and no new energy infrastructure to transport oil and natural gas within and outside of North America.

Difference between KIG and Reference Case	<u>2020</u>	<u>2040</u>
Employment	-4.1 million	-5.9 million
Cumulative GDP (from 2018)	-\$823 billion	-\$11.8 trillion
Annual energy expenditures per household	+\$1,958	+\$4,552
US crude oil and NGL production	-6.0 MMbpd	-11.7 MMbpd
US natural gas production	-25 Bcfd	-81 Bcfd
Net liquid petroleum imports	+6.0 MMbpd	+11.1 MMbpd
Crude oil prices (WTI)	+\$25 per barrel	+\$40 per barrel
Natural gas prices (Henry Hub)	+\$8 per MMbtu	+\$21 per MMbtu
Retail electricity prices	24.1%	56.4%
Economy wide CO2 emissions	-3.5%	-13.1%

While the outcomes are on the edge of the model's capabilities, they are indicative of the likely pressures that would result from a scenario as extreme as was modeled here. See Caveats and Limitations section for more discussion.

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Executive Summary

Over the last decade, the *Keep It In The Ground* (KIG) effort has evolved from its initial start as a movement to halt oil and gas development on public lands in the US to a climate movement. If successful, efforts to stop the extraction of fossil fuels over the next two decades could have a profound economic impact on the United States. The American Petroleum Institute (API) sponsored this study to spotlight the implications of a future in which *no new fossil fuel production development* occurs.

API commissioned OnLocation, Inc. to perform this study using the National Energy Modeling System (NEMS) that is maintained by the Energy Information Administration (EIA) and used to develop the Annual Energy Outlook (AEO). The AEO 2016 model and input files were used as a starting point and reference case in this analysis. The KIG assumptions provided by API to describe the KIG scenario included:

- No new private, State or Federal oil and natural gas leases
- A complete ban on the use of hydraulic fracturing technology in drilling for oil and gas
- No new coal mines or expansion of existing mines
- No new energy infrastructure (e.g., pipelines)
- Restricting imports/exports to existing trade infrastructure
- No expansion of international gas pipelines into the U.S.

To perform this study, OnLocation made changes to the NEMS model and data inputs to reflect the above assumptions. See Appendix A for a description of this implementation of NEMS. Since OnLocation performed this study and not EIA, all subsequent references to the model and its outputs will be referenced as coming from the KIG-NEMS.

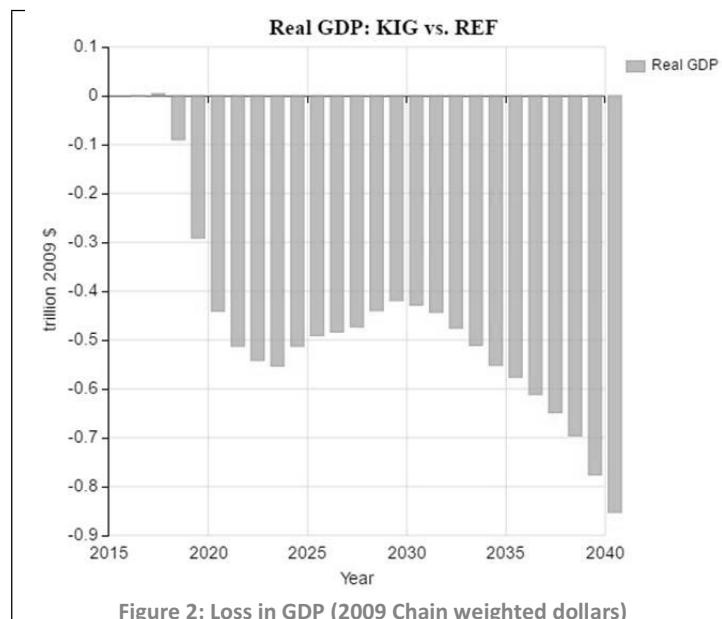
This Executive Summary presents the highlights of the Keep It in The Ground analysis. A more in-depth look at the results of the KIG-NEMS model runs are provided in the body of the report.

	Increase over Ref. Case		
	<u>2020</u>	<u>2030</u>	<u>2040</u>
Increase in Direct Household			
Energy Expenditures	\$783	\$938	\$1,167
Increase Over Reference Case	16%	21%	26%
Total Increase in Energy Expenditures			
Economy Wide / household	\$1,958	\$3,128	\$4,552
Increase Over Reference Case	19%	29%	39%
Natural Gas : Residential	74%	114%	124%
Motor Gasoline	11%	18%	24%
Average Electricity Price	24%	29%	56%

Figure 1: Potential Household Energy Expenditures and Price Increases Relative to Reference Case

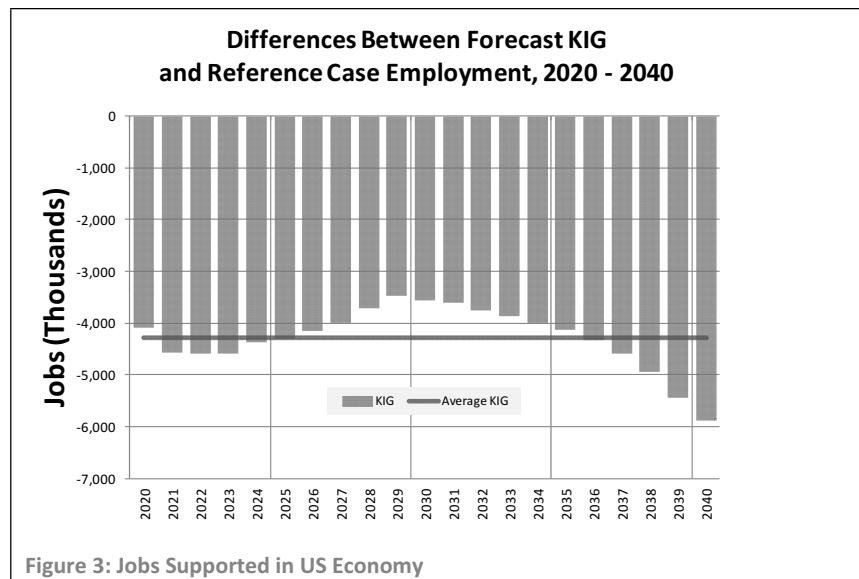
As one would expect, restricting US production of coal, natural gas and oil could drive up the prices of energy for consumers (Figure 1). Direct household energy expenditures (electricity, home heating/cooking and transportation fuels) could increase by \$1,167 in 2040. Including “hidden” energy costs in other goods and services, total additional household expenditures due to the KIG scenario could be roughly \$4,552.

A primary indicator used to gauge the health of the economy is the gross domestic product (GDP). Higher energy prices and lower domestic energy production lead to a significant drop in US GDP. In real dollar terms, GDP is reduced by \$440 billion in 2020 and \$850 billion in 2040 (Figure 2). The cumulative loss in GDP is estimated to be \$823 billion by 2020 and \$11.8 trillion by 2040.

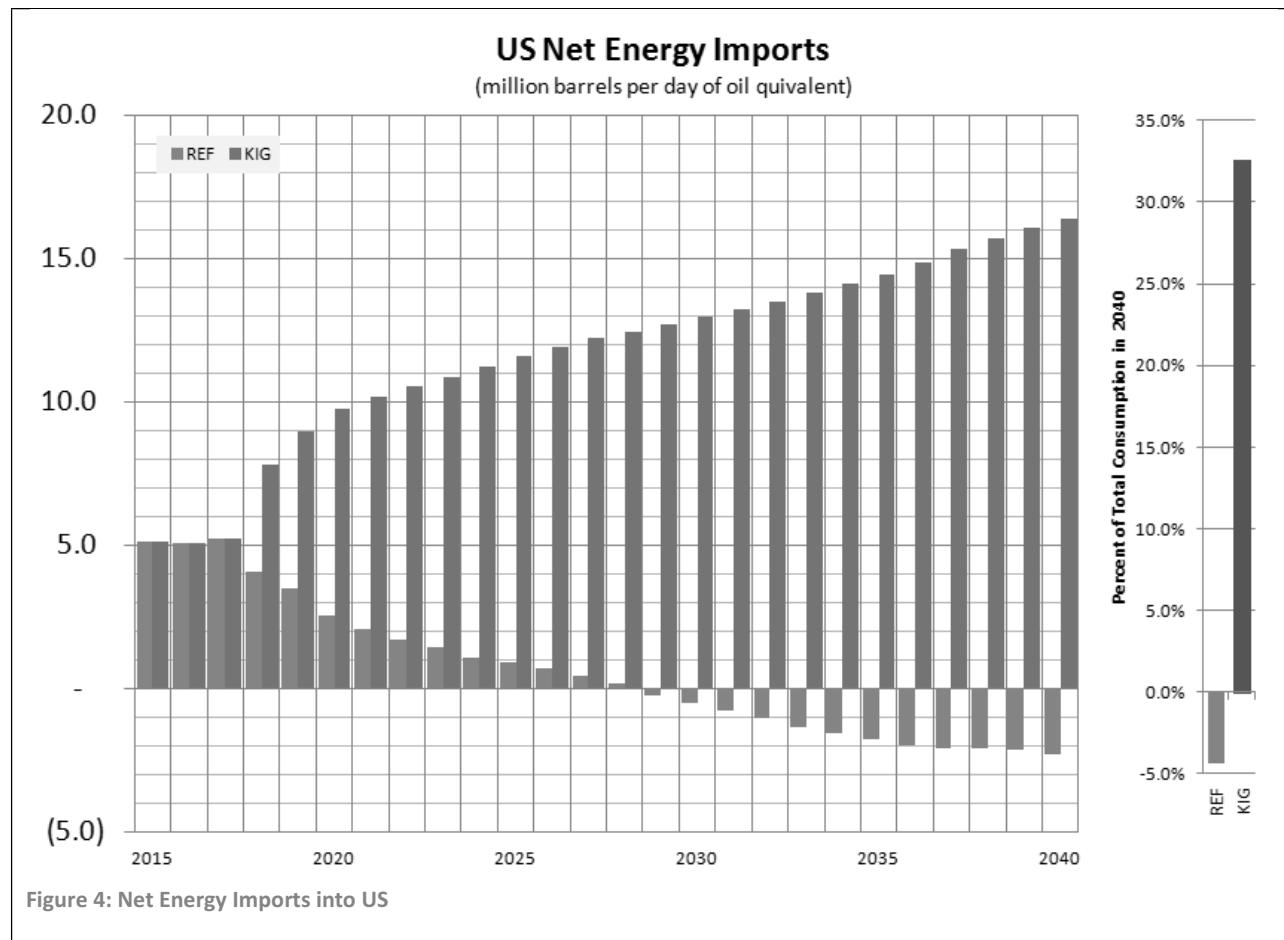


Lower GDP, higher energy prices and lower domestic production of energy lead to job losses. While the economy continues to grow, albeit at a slower pace, the lower level of economic activity leads to unprecedented job losses. As shown in Figure 3, over the forecast period, job losses range from 3.5 million to 5.9 million raising the unemployment rate to over 7% throughout much of the 2020-2040 period.¹

¹ Estimates of EMPLOYMENT AND JOBS FORECASTS CORRESPONDING TO TWO “LEAVE IT IN GROUND” SCENARIOS, Prepared for OnLocation, Inc. By Management Information Services, Inc., January 4, 2017



Restricted production leads to reversals in energy trade trends. As shown in Figure 4, the US goes from a net exporter of energy in the reference case to a net importer in the KIG scenario. Instead of being a net exporter and becoming energy secure, the US becomes a net importer of energy rising to unprecedented levels.



As is evident in the model outputs, KIG-NEMS is stretched to respond to the KIG scenarios. Because we are pushing the model significantly, one should view the results as being indicative and directionally accurate but not necessarily a point forecast. The reader should read the [Caveats and Limitations](#) section for more discussion.

Background

Over the last decade, the *Keep It In The Ground* (KIG) effort has evolved from its initial start as a movement to halt oil and gas development on public lands in the US to a climate movement. If successful, efforts to stop the extraction of fossil fuels over the next two decades could have a profound economic impact on the United States. The American Petroleum Institute (API) sponsored this study to spotlight the implications of a future in which *no new fossil fuel production development* occurs.

This study seeks to estimate the quantitative impact of the KIG scenario. While there are many energy models that could be employed in investigating a scenario like the KIG scenario (see the following section Approach for more specifics regarding the scenario), API chose to contract with OnLocation who has access and use of the Energy Information Administration's NEMS model. NEMS is used by EIA to project the energy, economic, environmental, and security impacts on the United States of alternative energy policies and different assumptions about energy markets. The projection horizon is approximately 25 years into the future². The projections in Annual Energy Outlook 2016 (AEO2016) are from the present through 2040.

This period is one in which technology, demographics, and economic conditions are sufficiently understood to represent energy markets with a reasonable degree of confidence. NEMS provides a consistent framework for representing the complex interactions of the U.S. energy system and its response to a wide variety of alternative assumptions and policies or policy initiatives. As an annual model, NEMS can also be used to examine the impact of new energy programs and policies.³

NEMS projections are not predictions of what will happen, but rather modeled estimates of what may happen given certain assumptions and methodologies. The NEMS model was developed and is maintained by EIA for use in developing annual projections for the "Annual Energy Outlook" and for evaluating energy policies based on service requests from Congress and various government agencies who specify the scenarios and assumptions for the analysis.

OnLocation has provided technical support in the design, development and application of the NEMS model since its creation over 20 years ago. Our technical and modeling experts have made major contributions to many of the modules of NEMS. Collectively, the staff of OnLocation has over 100 years of working experience with integrated energy models including NEMS. OnLocation's senior staff and associate consultants have provided insights and solutions to the business and policy challenges of the Department of Energy, Environmental Protection Agency, energy corporations and various non-governmental organizations that support policymakers in Congress and elsewhere. Using NEMS outputs, Management Information Systems, Inc., provided estimates of the employment impacts of the KIG scenario.

² Note, the latest release of NEMS goes to 2050 but was not available in time for this study. See AEO2017

³ See EIA's Overview of NEMS

Approach

To assess the Keep It in The Ground (KIG) future, OnLocation customized a version of EIA's National Energy Modeling System (NEMS) to assess the impact on energy markets and the economy. The state level impact estimated in this study was performed by Management Information Services, Inc. based on NEMS model outputs for the KIG scenario.

OnLocation used EIA's [Annual Energy Outlook 2016](#) Reference Case as the baseline: a business-as-usual trend estimate, given known technological and demographic trends and reflecting existing laws and regulations. The Reference case assumes Clean Power Plan (CPP) compliance through mass-based standards that establish caps on CO₂ emissions from fossil-fired generators covered by the CPP. The KIG scenarios were introduced into the model in 2018 at which point the economic impact becomes immediately visible in the estimates on various economic measures.

For the alternative "Keep It in The Ground" case, OnLocation worked with API staff to identify the specifications for a case that severely limits the expanded production of fossil fuels in the US. These specifications addressed changes to the model or model inputs to yield⁴:

- No new private, State or Federal oil and natural gas leases
- A complete ban on the use of hydraulic fracturing technology in drilling for oil and gas
- No new coal mines or expansion of existing mines
- No new energy infrastructure (e.g., pipelines)
- Restricting imports/exports to existing trade infrastructure
- No expansion of international gas pipelines into the U.S.

In addition to the Reference and KIG scenarios, a sensitivity case that limited construction of new nuclear power plants was evaluated.

OnLocation made appropriate modifications to the KIG-NEMS model⁵ to run the alternative "Keep It in The Ground" scenario in KIG-NEMS.

⁴ See Appendix II for a detailed discussion of the changes to the inputs and model code that were used to reflect these specifications.

⁵ To constrain the penetration of PV generation to reasonable levels given its potential impact on the grid, OnLocation modified the NEMS code. OnLocation previously made this modification in an earlier version of the NEMS code and the latest AEO2017 version of NEMS includes this code modification.

Results

U.S. policies of “keep it in the ground” (KIG) generate the following impacts relative to the EIA’s Annual Energy Outlook 2016 Reference Case. The keep it in the ground scenario includes no new oil and natural gas leases on private, State or federal lands, a ban on hydraulic fracturing, no new or expansions of existing coal mines, and no new energy infrastructure to transport oil and natural gas within and outside of North America. The KIG scenario model projects the following potential impacts:

- The KIG scenario leads to significantly higher energy prices, with oil prices \$40 per barrel higher by 2040 and natural gas prices \$21 per MMBtu higher than in the reference case. Retail electricity prices increase by 24 percent in 2020 and 56% in 2040.
- Domestic production of crude oil and natural gas liquids (NGLs) decreases by 6 million barrels per day (MMbpd) in 2020 and 11.7 MMbpd in 2040 while natural gas production decreases by 25 and 81 billion cubic feet per day (Bcf) in the same years respectively relative to the reference case.
- These higher energy prices and lower domestic fossil energy production lead to lower economic growth with a cumulative loss in GDP of \$823 (real 2009\$) billion by 2020 and \$11.8 (real 2009\$) trillion by 2040⁶.
- Job losses associated with the KIG scenario in 2020 were estimated to be 4.1 million and in 2040 were as high as 5.9 million.
- Net liquid petroleum imports increase by 6 MMbpd in 2020 and 11 MMbpd in 2040.
- Economy-wide energy expenditures increase by a cumulative \$470 million by 2020 and \$8.8 trillion by 2040 despite reduced energy consumption. In 2020 the increase equates to \$1,900 *per household* and by 2040 the increase is \$4,440.
- While coal prices rise due to limiting production capability in each region, overall coal consumption rises relative to the reference case due to fuel switching in the power sector.
- Economy-wide energy related CO₂ emissions decrease from the reference case by 3 percent in 2020 and 13 percent in 2040.

*While the outcomes are on the edge of the model’s capabilities, they are indicative of the likely pressures that would result from a scenario as extreme as was modeled here.
See Caveats and Limitations section for more discussion.*

⁶ Macroeconomic values are presented in 2009 chain-weighted dollars. Unless otherwise stated, all other monetary values are in real 2015 dollars.

Economic Impacts (based on KIG-NEMS model)

GDP Impacts

- Lower U.S. energy production and higher energy prices reduce GDP by \$440 billion in 2020 and \$850 billion in 2040; the percentage difference ranges between 2.0 to 3.0 percent in the KIG scenario relative to the reference case.
- The cumulative loss is \$ 820 billion by 2020 and \$11.8 trillion by 2040 (undiscounted).

Industrial Output Impacts

- Industrial output expressed in monetary terms is initially lower (by \$250 billion in 2020) but then remains relatively unchanged from the reference case in the long-term due to higher embedded energy prices.
- The cumulative reduction from the reference case is \$470 billion by 2020 and \$4.3 trillion by 2040.

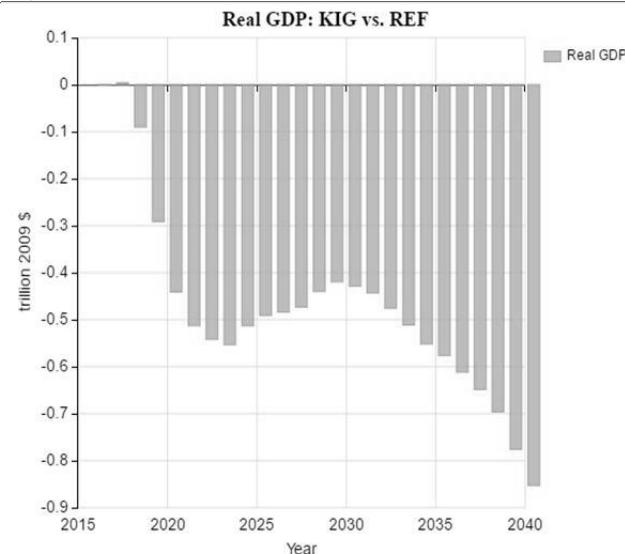


Figure 5: Loss in GDP (2009 Chain weighted dollars)

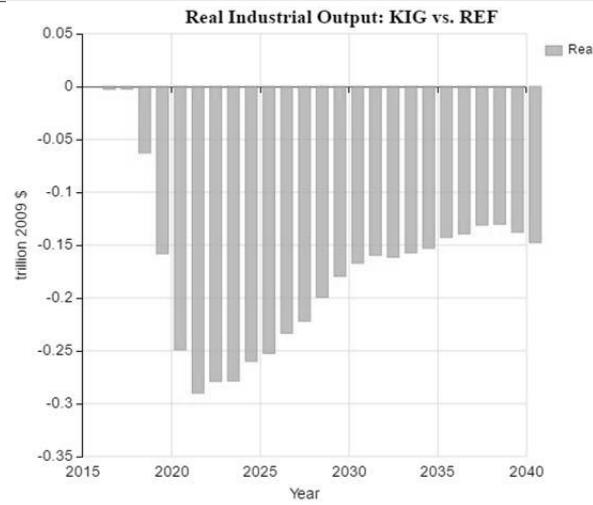


Figure 6: Loss in Real Industrial Output

Job Impacts (based on KIG-NEMS model)

Jobs Supported in US Economy

- A major result of the KIG scenario is the loss of an average of about 4.2 - 4.3 million job-years annually between 2020 and 2040 in the U.S., compared to the Reference Case.
- Job losses in 2020 were estimated to be 4.1 million and in 2040 were as high as 5.9 million.

Increases in Unemployment

- The KIG scenario results in a persistent recession level unemployment throughout the 2020-2040 period.
- Unemployment rates of 8.2% have been exceeded only twice in the past 70 years – in 1982-3 and 2009-11.

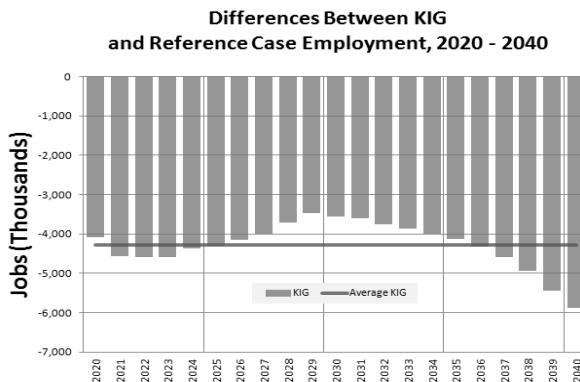


Figure 7: Loss in Jobs

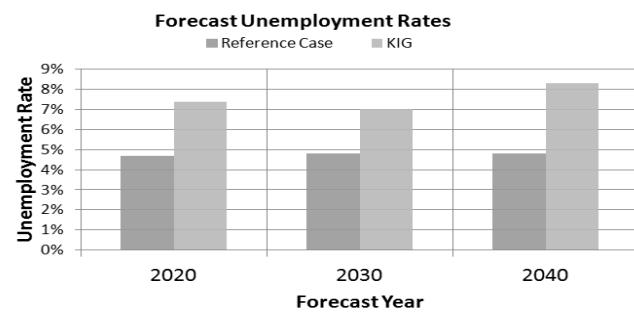


Figure 8: Unemployment

Jobs Losses by State in 2040

- The major state job losses are concentrated in those states that are the most energy industry-dependent and that lack a strong base of non-energy industries and jobs, such as North Dakota, West Virginia, and Wyoming.
- To derive the state job estimates, MISI used the KIG-NEMS estimates of the regional outputs compared to the Reference Case, across the nine Census Regions and the 22 Electricity Market Module Regions to determine the relative impacts among the states.
- MISI assumed that employment changes are related to the *changes* in energy production and consumption and estimated job changes as a function of the energy data series for electricity production and consumption by region.
- The resulting job estimates corresponding were determined by the energy market perturbations caused by the scenarios and the forecast state-by-state employment changes through 2040. (see following description of MISI Approach)

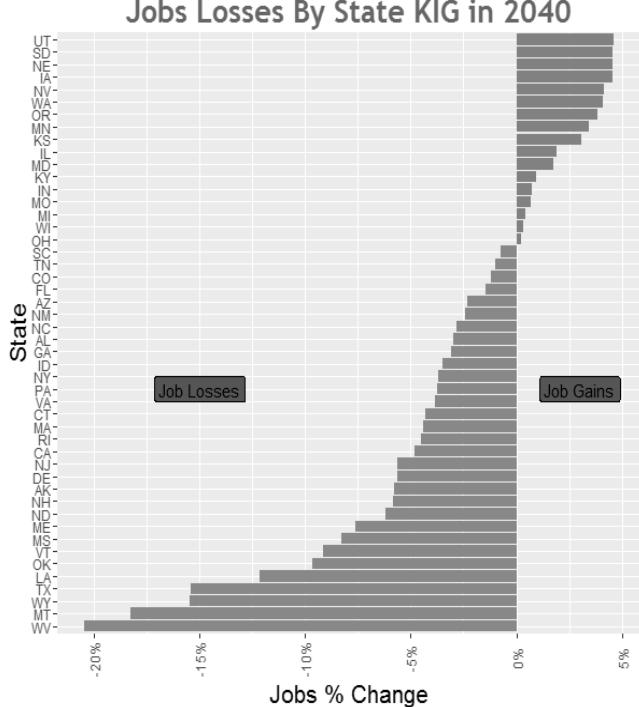


Figure 9: Job Losses by State in 2040

Management Information Systems, Inc. (MISI) Approach to Modeling Job Impacts¹

- Using data from the KIG-NEMS scenarios, MISI was asked to estimate the employment impacts of the KIG scenario at the state level because KIG-NEMS does not generate state-level data.
- MISI estimated the employment and jobs impacts (direct and indirect) of the KIG scenario through 2040 using the full time equivalent job concept.
- MISI estimated job impacts in the U.S. for the years 2020 through 2040 and job impacts of lower 48 states for 2020, for 2030, and for 2040.
- MISI employment estimates may vary from those available from KIG-NEMS for several reasons.
 - State employment forecasts are not available from KIG-NEMS.
 - First Reference Case state population forecasts were developed using Weldon Cooper Center for Public Service, Demographics Research Group, projections, and using EIA AEO 2016 Reference Case total U.S. population forecasts as the control totals for each year.
 - Then Reference Case employment forecasts for each state were derived using the ratios of employment in each state to state population, available from BLS and Census. To be consistent, the national employment forecasts were reconciled with the state population and employment forecasts.
 - To derive the state job estimates corresponding to the KIG and the NN scenarios, MISI used the KIG-NEMS estimates of the regional outputs of the two scenarios, compared to the Reference Case, across the nine Census Regions and the 22 Electricity Market Module Regions to determine the relative impacts among the states.
 - MISI assumed that employment changes are related to the changes in energy production and consumption resulting from the two scenarios, and estimated job changes as a function of the energy data series for electricity production and consumption by region.
 - The resulting job estimates corresponding to each of the two alternate scenarios were determined by the regional energy market perturbations caused by the scenarios and the forecast state-by-state employment changes through 2040.
 - Relatively few states gained jobs and the state employment gains were usually much less than the job losses experienced in the most severely affected states.
 - Nevertheless, several states gain jobs under both scenarios, including Maryland, Minnesota, Nevada, Oregon, Utah, and Washington. The relatively few states that gain jobs are not fossil energy-dependent and have a strong base of non-fossil energy dependent sectors, industries, and jobs.
 - Thus, under both scenarios large job gains would likely occur in non-fossil energy dependent services and in industries such as Electric Vehicles, Hydrogen Vehicles, Solar Electric Power Generation, Wind Energy Systems, Geothermal Energy, Biomass Energy Systems, Photovoltaic Cells and Devices Manufacturing, Hydrogen Manufacturing, Hydro Energy, Energy Efficiency and Conservation Products and Systems, Hydrogen Energy Systems, Alternative Energy Systems, etc.
 - It is also important to note that job gains in these states are net job gains. Some jobs in certain sectors and industries could be lost under each scenario. However, these job losses could be exceeded by job gains in these states in other sectors and industries. Further, the job gains in these states could be accompanied by substantial job shifts among industries, sectors, and occupations within each state. That is, even in the states that gain jobs some industries and sectors would lose jobs. Further, even in those sectors and industries that gain jobs, some workers may be displaced.

¹ EMPLOYMENT AND JOBS FORECASTS CORRESPONDING TO TWO “LEAVE IT IN GROUND” SCENARIOS , Prepared For OnLocation, Inc. By Management Information Services, Inc., January 4, 2017

Energy Prices (based on KIG-NEMS model)

Home Energy Bills per Household

- Households could spend on average \$630 per year (up to almost \$800 in 2040) or over 30 percent more for energy use in their homes in the KIG case, even while consuming less energy (roughly 5 percent less in 2020 and 13 percent in 2040).
- Higher fuel prices could push up the average price of electricity by 24 percent in 2020 and 56 percent by 2040. The coal and gas price increases appear to compound at the end of the horizon
- Natural gas prices could be severely impacted by reduced domestic production, with Henry Hub prices potentially rising to almost \$26 per MMBTU by 2040 and residential prices potentially rising to almost \$28.
- Home heating oil prices potentially rise to significantly higher levels in the KIG scenario to over \$5.60 in constant 2015 dollars.

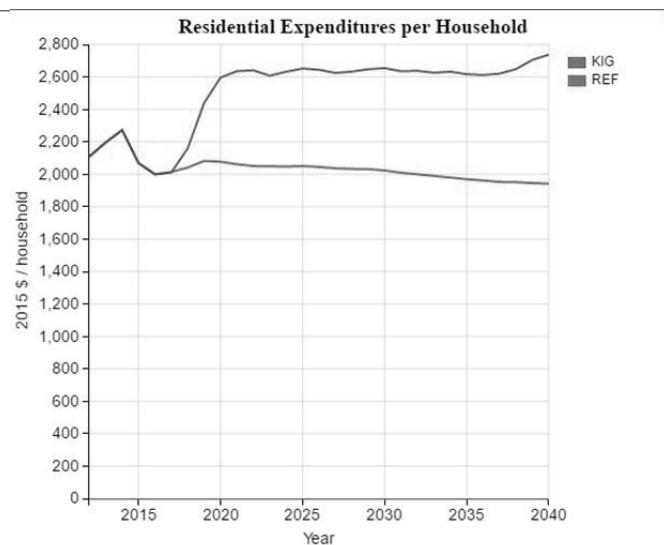


Figure 10: Residential Energy Expenditure Per Household

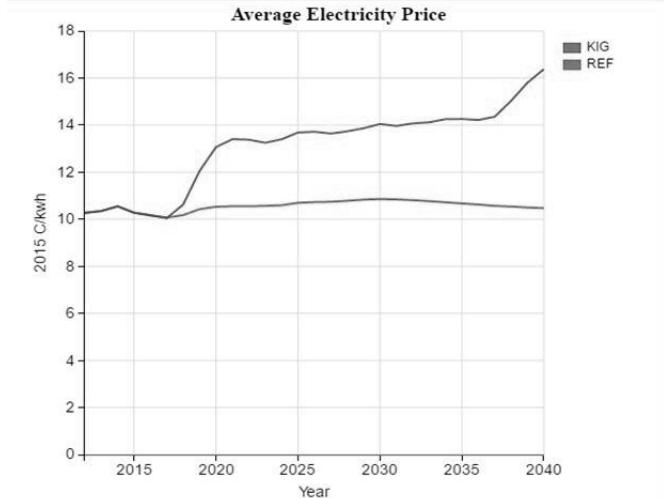


Figure 11: Average Electricity Price

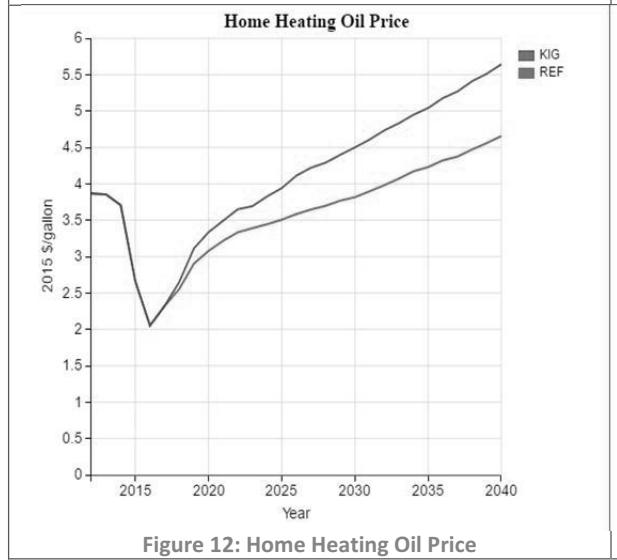


Figure 12: Home Heating Oil Price

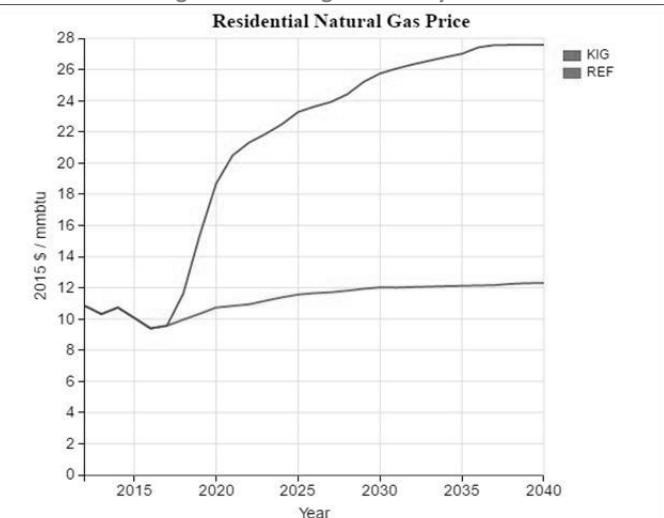


Figure 13: Residential Natural Gas Price

Energy Prices Continued (based on KIG-NEMS model)

Total Household Energy Bills

- When vehicle energy costs are included, the average household could spend an average of \$930 more per year or up to roughly \$1,167 in 2040.
- In the KIG scenario gasoline prices could rise to over \$4.70 in constant 2015 dollars significantly higher than in the Reference case scenario.

Total Economy-wide Energy Expenditures

- Total energy expenditures could be 18 percent higher in the KIG case than the reference case in 2020 and could increase to 38 percent higher in 2040, or a cumulative increase of \$470 billion by 2020 and \$8.8 trillion by 2040.
- On a per household basis, the expenditure increase could be \$1,958 in 2020 and \$4,552 in 2040.

Loss in Disposable Personal Income

- Disposable personal income is lower as energy prices could rise with a reduction of \$320 billion in 2020 and \$790 billion in 2040 relative to the reference case, which equals a cumulative reduction of \$560 billion by 2020 and \$10.7 trillion by 2040.
- On a per household basis this loss could be \$2440 in 2020 and \$4990 in 2040.

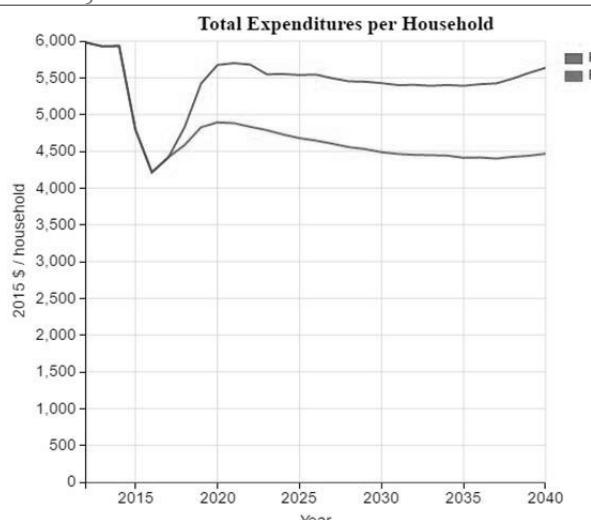


Figure 14: Total Expenditures Per Household

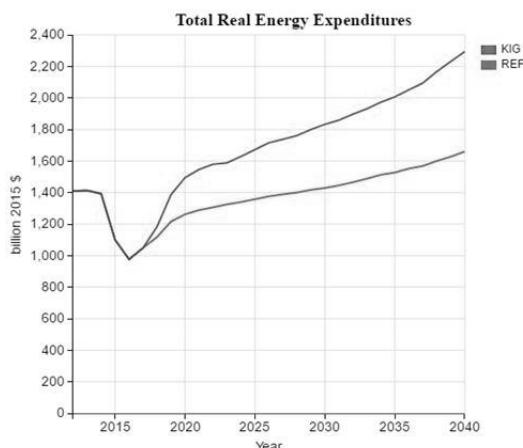


Figure 15: Total Real Energy Expenditures

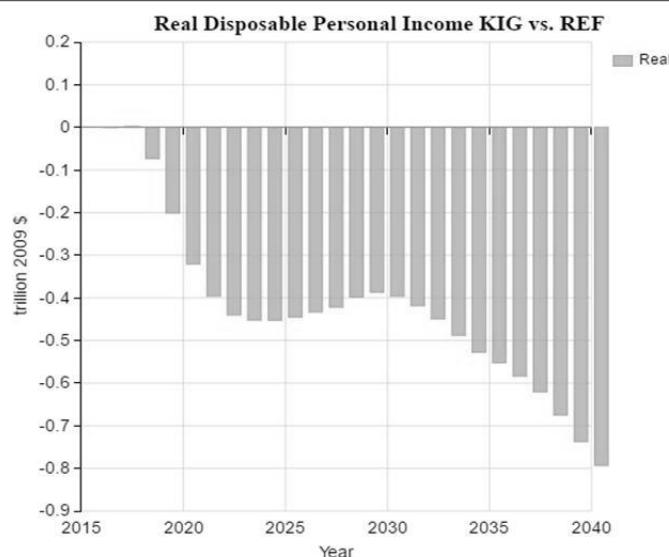


Figure 16: Loss in Real Disposable Income

Energy Prices Continued (based on KIG-NEMS model)

Other Energy Prices

- The model predicts that crude oil prices are driven up by lower U.S. production in the KIG scenario due to eliminating hydraulic fracking and without new private, State or Federal leases. They could rise to \$176 per barrel by 2040 compared to \$136 in the reference case.
- Gasoline prices could rise in parallel with crude oil prices, potentially increasing 11 percent by 2020 and 24 percent by 2040.
- Henry Hub natural gas prices could rise dramatically in response to no hydraulic fracturing and without new private, State or Federal natural gas leases. According to the model, natural gas prices were the most dramatically impacted by the KIG scenario, potentially rising by almost \$21 per MMBtu or 440 percent by 2040.
- By 2040, the model predicts that the price of coal to electric generators could increase by almost 40 percent relative to the reference case.

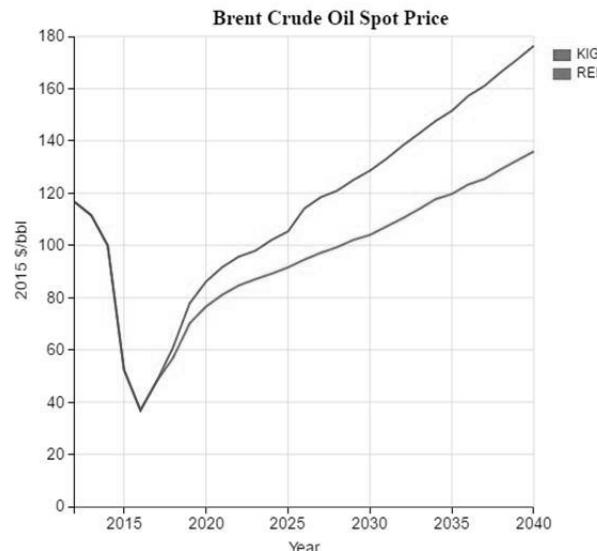


Figure 17: Brent Crude Oil Spot Price

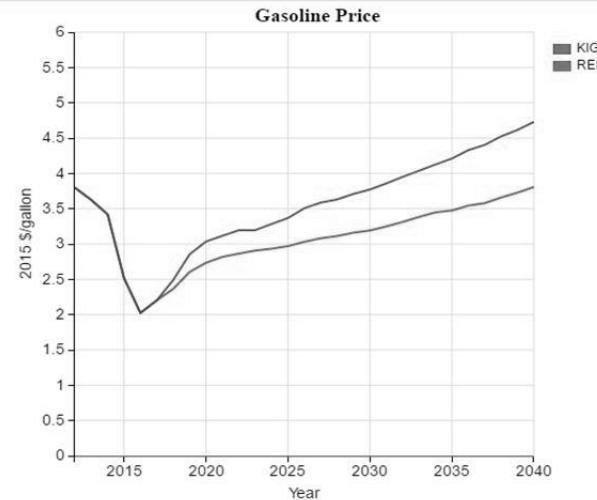


Figure 18: Gasoline Price

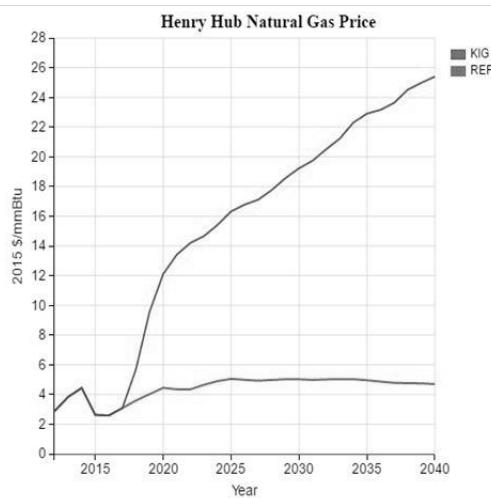


Figure 19: Henry Hub Natural Gas Price



Figure 20: Power Sector Coal Price

Fossil Energy Production (based on KIG-NEMS model)

Oil and NGL Production Domestic oil production is significantly reduced immediately due to restrictions on hydraulic fracturing with a 6 MMbpd decrease in 2020, and further reductions occur over time as existing leases are depleted. By 2040 the loss in production is almost 12 MMbpd.

Natural Gas Production Similar reductions occur for natural gas, with significant reductions in shale gas production that was otherwise projected to provide the major share of increased production in the reference case. In 2020 production is 9 tcf or 25 Bcfd lower and by 2040 the loss is 29 Tcf or 81 Bcfd.

Coal Production

- Coal production is projected to decline in the reference case due to shrinking demand from the power sector.
- Although coal production is constrained, it still is higher than in the reference case due to the very high cost of natural gas and fuel switching in the power sector.
- Coal production increases by 67 million tons or 8 percent in 2020 from the reference case but stays below historic levels. The peak increase occurs in 2030 with an additional 155 million tons or 8 percent increase.

Energy Imports Restricted production leads to reversals in energy trade trends. The US goes from a net exporter of energy by 2029 in the reference case to an ever increasing net importer. By 2040 the US is importing almost 1/3 of its total energy needs.

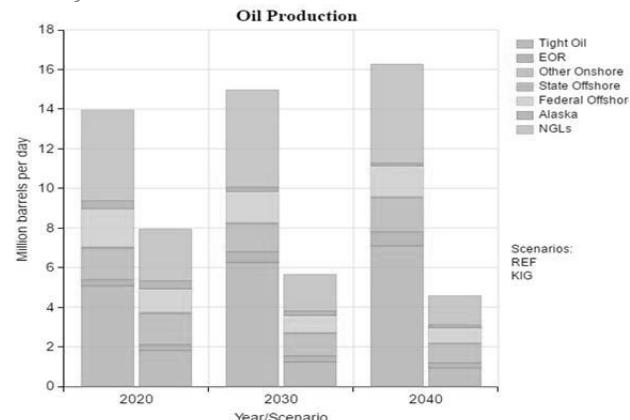


Figure 21: Oil Production

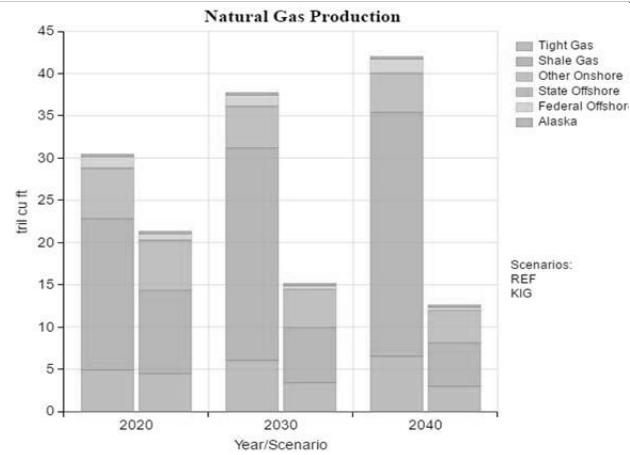


Figure 22: Natural Gas Production

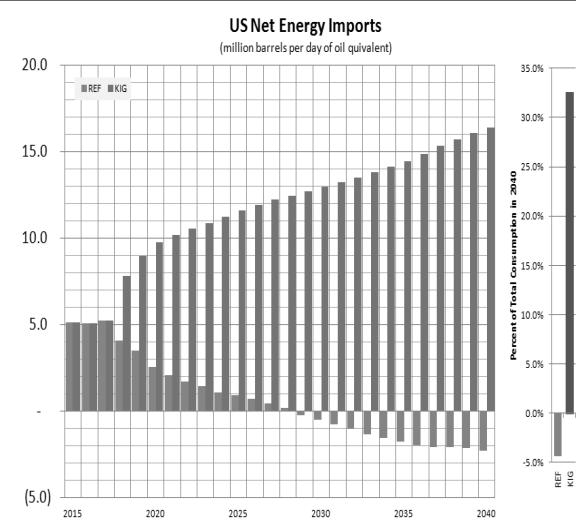


Figure 23: US Net Energy Imports

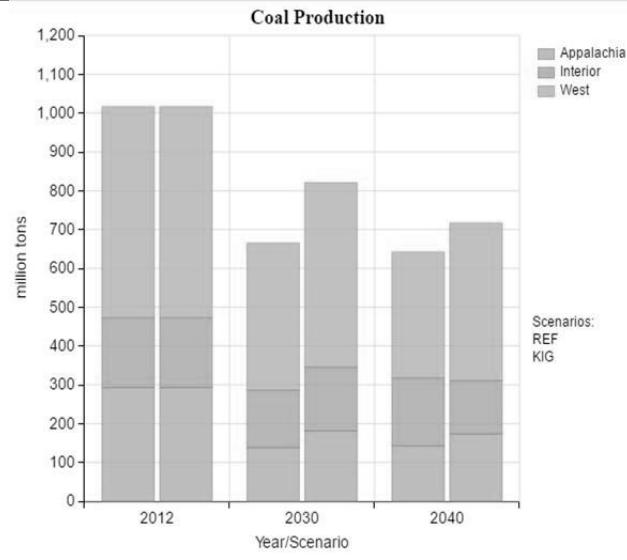


Figure 24: Coal Production

Fossil Energy Demand (based on KIG-NEMS model)

Liquids Fuel Demand The demand for liquid fuels (petroleum and biomass based) remains relatively constant between the cases as transportation demand shrinks due to higher prices while industrial demand increases due to substitution for natural gas.

- Transportation demand decreases by 0.6 quads in 2020 and 0.7 quads by 2040 (2 to 3 percent)
- Industrial liquids demand increases by 0.2 quads or 2 percent in 2020 and 0.5 quads or 4 percent in 2040.

Natural Gas Demand Natural gas demand is lower in all sectors in the KIG scenarios due to much higher prices, especially in the power sector where it is reduced by over 10 quads or 80 percent by 2040.

Coal Demand

- Coal use in the power sector increases in the KIG scenario by 1.4 quads in 2020 and 3.0 quads in 2040 relative to the Reference case.
- Coal use increases as part of the shift away from natural gas due to the latter's significantly higher relative price.
- The use of coal is declining in both scenarios driven by the Clean Power Plan; it just declines slower in the KIG scenario.
- In the last few years of the forecast, coal imports rise slightly.

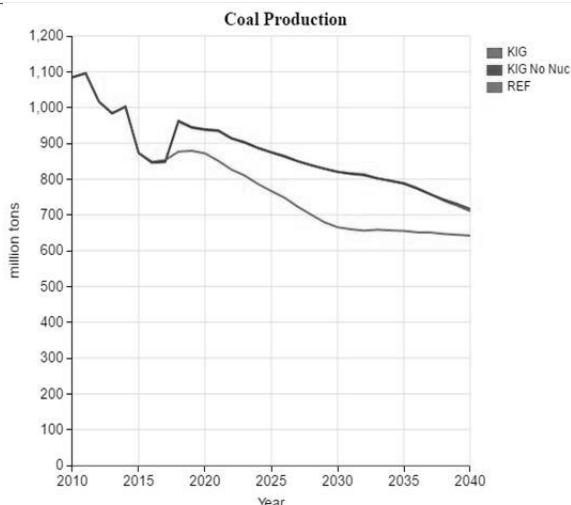


Figure 27: Coal Production Total

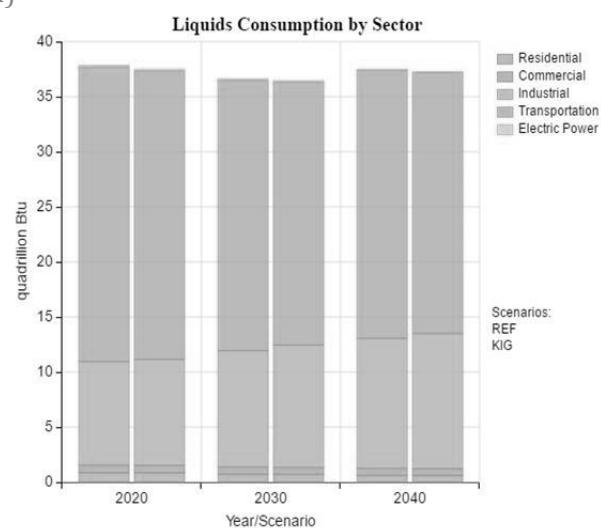


Figure 25: Liquid Fuels Consumption by Sector

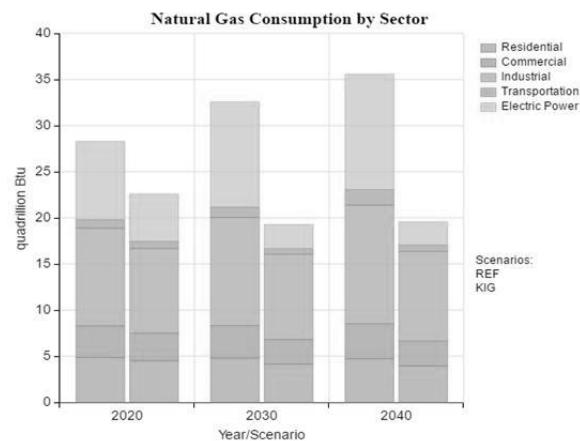


Figure 26: Natural Gas Consumption by Sector

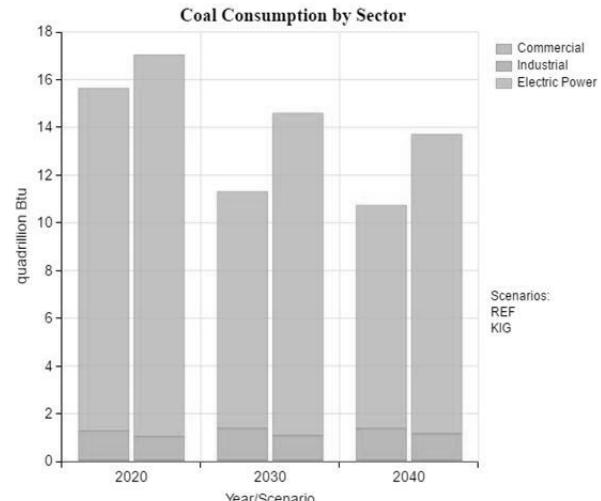


Figure 28: Coal Consumption by Sector

Fossil Energy Imports and Exports (based on KIG-NEMS model)

Net Oil Imports Instead of declining as in the reference case, net petroleum imports are projected to increase significantly in the KIG scenario.

- By 2020, net oil imports are 5.6 MMBpd higher than in the reference and by 2040 11.1 MMBpd higher, reaching a total of 12.5 MMBpd.

Natural Gas Imports and Exports

- Imports of natural gas rise to make up some of the domestic lost production although remain within the limits of the current infrastructure capacity
- At the same time, exports fall due to higher prices in the U.S.
- The total annual cost of imports rises to roughly \$6 billion in 2020 and \$129 billion in 2040 in the KIG case compared to a net revenue of \$48 billion and \$57 billion respectively in the Reference case.
- The cumulative difference is a net increase in outflows of \$2.2 trillion by 2040.

Net annual oil import expenditures Net annual expenditures for crude and product imports increase by \$150 billion in 2020 and \$580 billion 2040, leading to a cumulative increase in outflows of \$7.5 trillion by 2040.

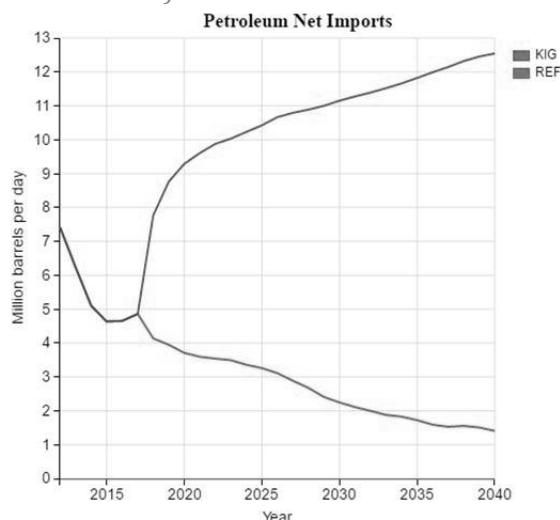


Figure 29: Petroleum Net Imports

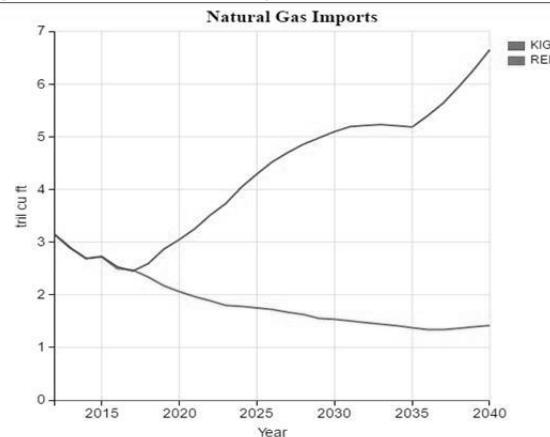


Figure 30: Natural Gas Imports

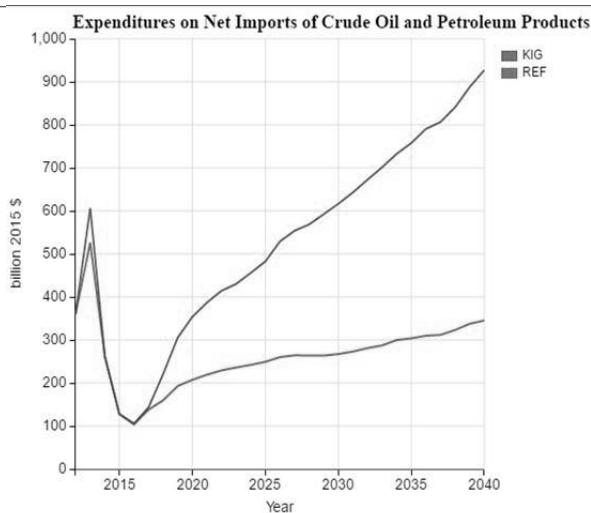


Figure 31: Expenditures on Net Imports of Crude/Petroleum Products

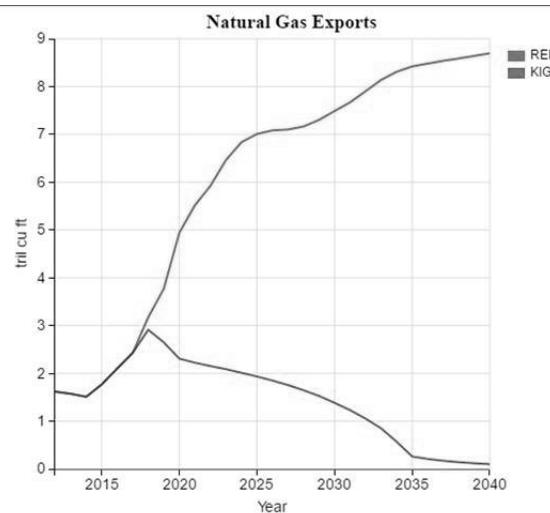


Figure 32: Natural Gas Exports

Electricity Generation (based on KIG-NEMS model)

Electric Power Due to the current diversity in power generation capacity, the power industry has the greatest ability to substitute fuels.

- As such the industry responds rapidly to the higher priced natural gas by shifting generation.
- The higher price of natural gas quickly could translate into a higher electricity price with a 24 percent increase from reference in 2020 and a 56 percent increase by 2040.
- Despite being relatively inelastic, the demand for electricity is reduced in response to the higher electricity price. Total electricity sales are 4 percent and 8 percent lower in the KIG case relative to reference in 2020 and 2040 respectively.

Electricity Generation

- As shown in Figure 35, in the face of higher natural gas prices, generation shifts away from natural gas.
- Natural gas generation is displaced by renewable energy sources (wind and solar), coal generation and nuclear power generation, as illustrated in Figure 36.

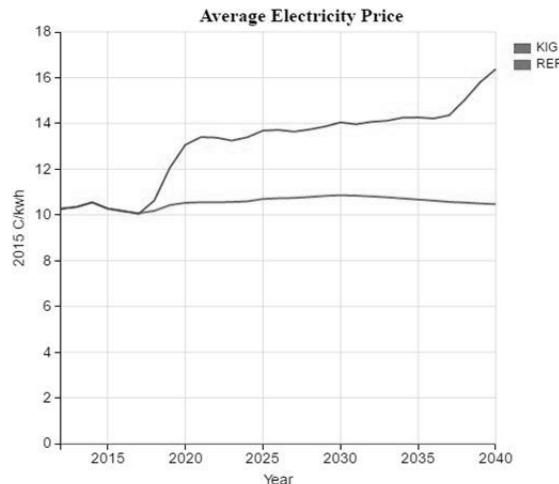


Figure 33: Average Electricity Price

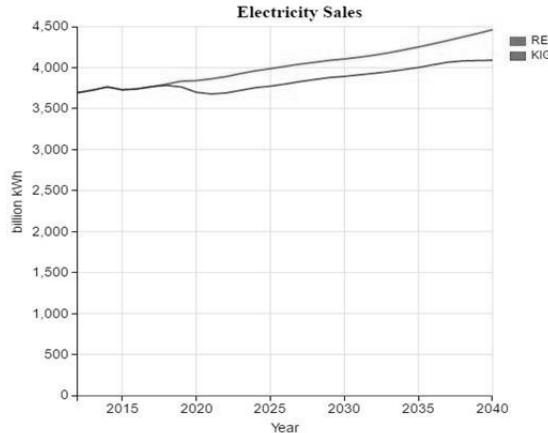


Figure 34: Electricity Sales

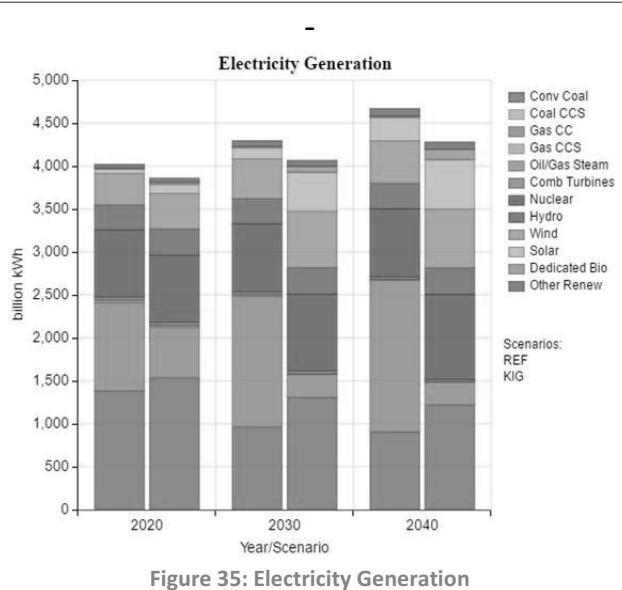


Figure 35: Electricity Generation

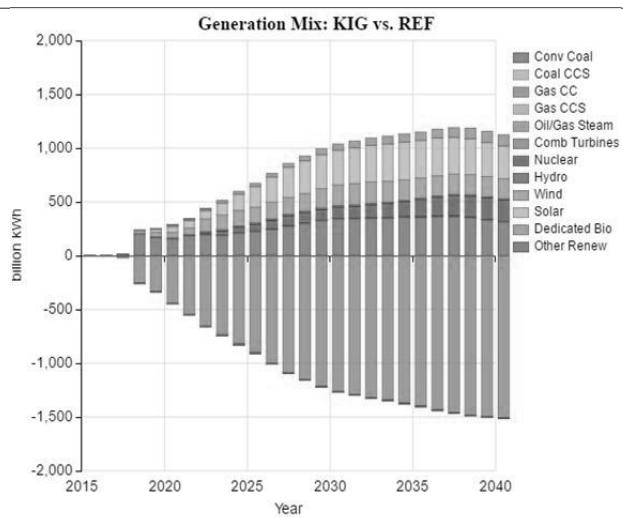


Figure 36: Changes in Generation Mix

Electricity Generation Continued (based on KIG-NEMS model)

Electricity Capacity

Reference Case has approximately 390 GW of capacity additions while the KIG case has about 520 GW.

- Reference and KIG cases have *no new coal* capacity additions.
- Reference case has only planned nuclear additions of 4.4 GW while the KIG case has an additional 25 GW of nuclear capacity built.
- In the Reference case about 200 GW of renewable capacity is added while in the KIG scenario the *majority* of new capacity is renewable with over 400 GW being built.
- Due to the intermittent nature of wind and photovoltaic (PV), more total capacity is needed even though generation is lower.

Capacity Retirements

The Reference case has a total of 190 GW of retirements. The KIG case retires an additional 55 GW of capacity.

- Higher natural gas prices lead to over 100 GW greater retirements of the less efficient and now more expensive oil and gas steam, gas turbine and combined cycle capacity in the KIG case.
- On the other hand, 48 GW less coal capacity retires in the KIG case.

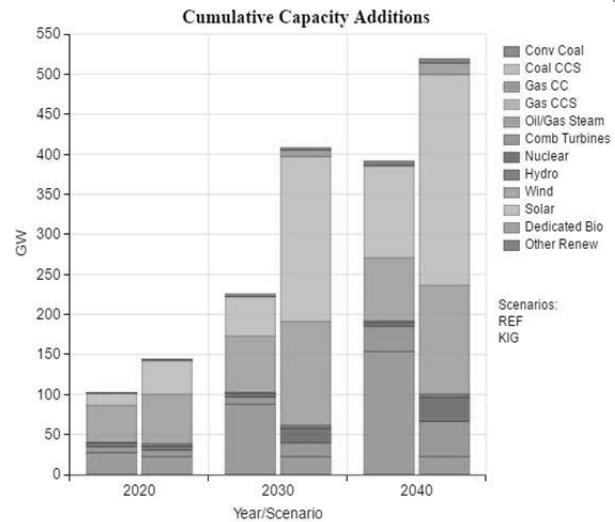


Figure 37: Cumulative Electric Capacity Additions

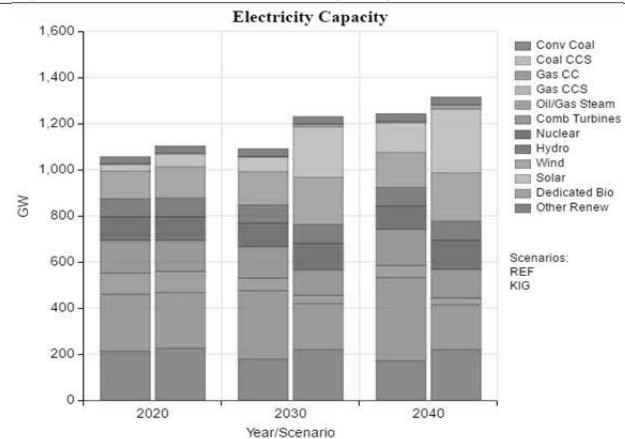


Figure 38: Electric Capacity in Select Years

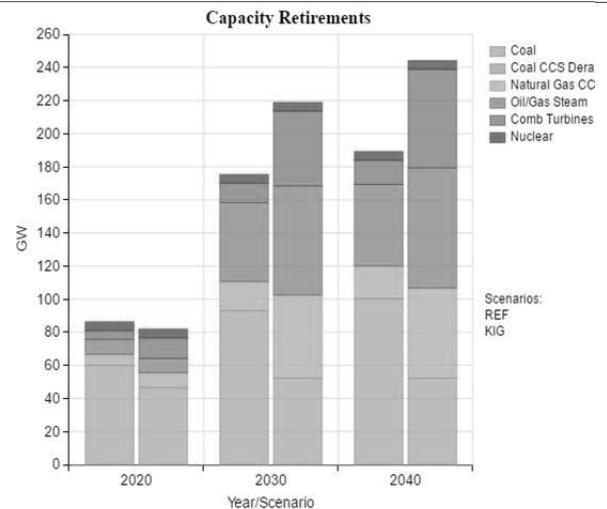


Figure 39: Cumulative Electric Capacity Retirements

No New Nuclear Power Plant Construction (based on KIG-NEMS model)

In the KIG case, new nuclear construction added about 25 GW of capacity. A case that did not allow any nuclear construction was added to assess the degree to which the new nuclear capacity was impacting the KIG results. This case assumed no new nuclear power plant construction was allowed except for the current 4GW planned and under construction.

GDP Impacts The restriction on nuclear construction had virtually no measurable impact on the KIG case.

Energy Prices Henry Hub natural gas prices could increase on average by \$1.00 (or 5 percent) as a result of the ban on new nuclear capacity in the KIG case, while electricity prices could rise on average 2 percent over the KIG case.

Energy Expenditures The natural gas and electricity prices could be incrementally higher in the No Nuclear case, which results in increased household expenditures and total energy expenditures.

Restricted Capacity Additions The restriction on new nuclear construction resulted in more wind and PV capacity.

Capacity Retirements The restriction on new nuclear construction resulted in greater retention of natural gas fired capacity (CC, Oil and Gas steam and combustion turbines)

Electricity Generation When new nuclear capacity cannot be added, additional generation is provided by gas combined cycles, wind and PV.

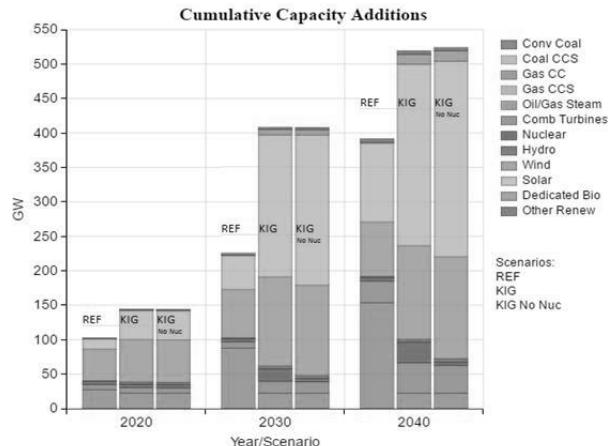


Figure 40: No New Nuclear: Cumulative Electric Capacity Additions

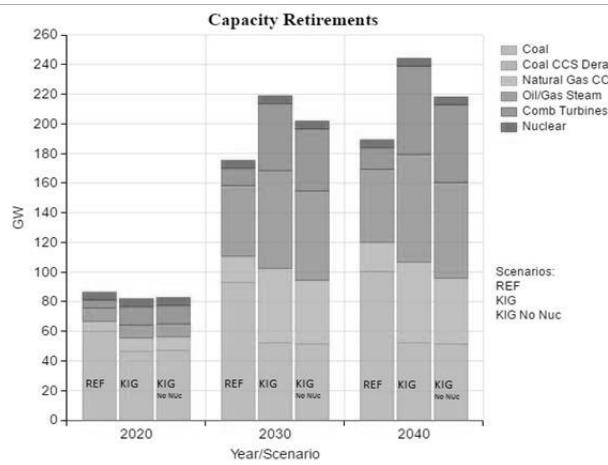


Figure 41: No New Nuclear: Cumulative Capacity Retirements

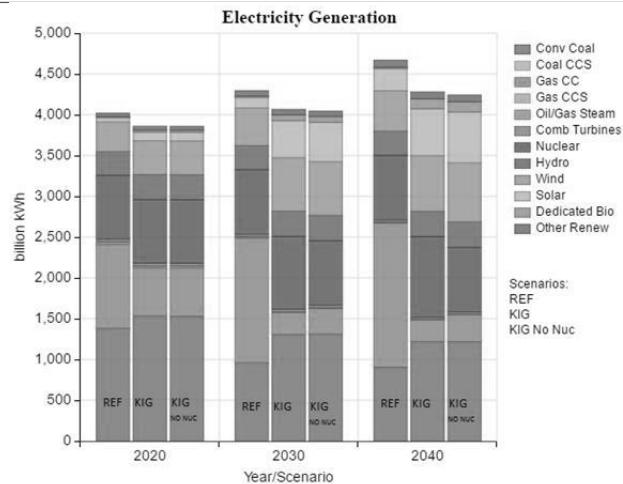


Figure 42: No New Nuclear: Electricity Generation

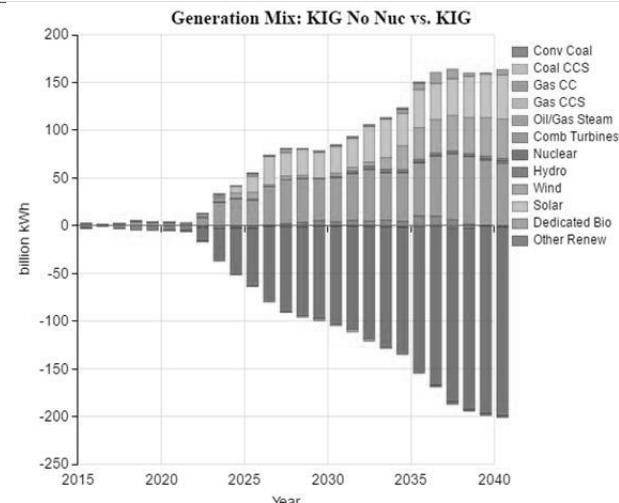


Figure 43: No New Nuclear: Changes in Generation Mix

Carbon Emissions (based on KIG-NEMS model)

Power Sector CO2 Emissions

The decline in fossil-fueled electricity generation reduces CO2 emissions relative to the reference case, but not dramatically due to an increase in coal generation.

- The inclusion of new nuclear capacity additions makes a relatively small difference
- Emissions are 20 to 24 MMT (1 percent) lower than the reference case in 2020, and 284 to 296 MMT (18 to 19 percent) lower in 2040, depending on whether new nuclear capacity is built
- Cumulative reductions are 0.1 gigatonnes by 2020 and 2.4 to 2.8 Gt or 6 to 7 percent lower in 2040
- In 2015 power emissions were 22 percent below their 2005 level. In the KIG scenarios in 2040, power sector emissions are roughly 48 percent below their 2005 level

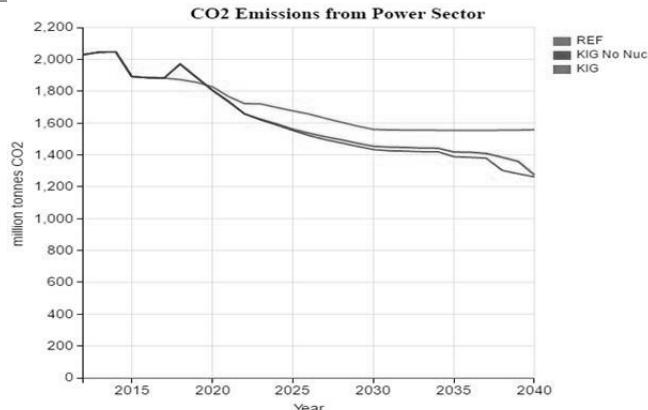


Figure 44: CO2 Emissions from Power Sector By Year

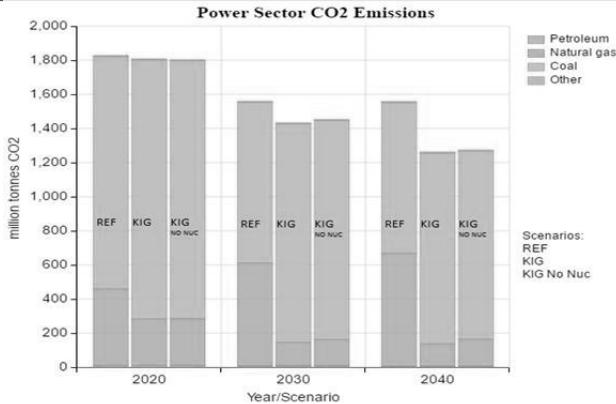


Figure 45: CO2 Emissions from Power Sector Select Years

Economy-Wide CO2 Emissions

- Emissions economy-wide are reduced by roughly 185 MMT in 2020 and 660 in 2040 or 3 and 13 percent respectively
- Cumulative emissions are 3.9 Gt lower in 2030 and 8.9 to 9.1 Gt in 2040 than the reference case which is a 7 percent reduction in each period
- In 2015 emissions were 12 percent below their 2005 level. In the KIG scenarios in 2040, the KIG achieves a 27 percent reduction from 2005 energy-related CO2 emissions

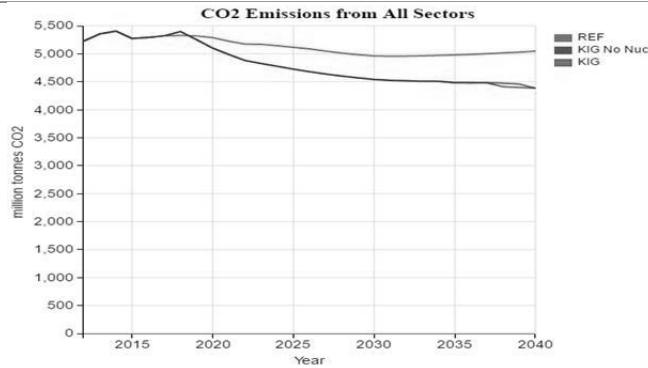


Figure 46: CO2 Emissions from All Sectors By Year

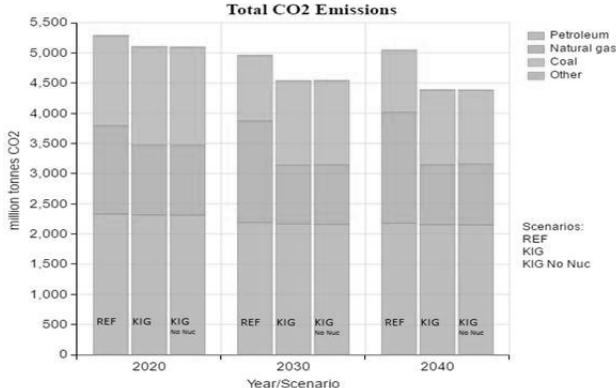


Figure 47: CO2 Emissions from All Sectors Select Years

Caveats and Limitations

Given the extreme nature of the KIG scenario, KIG-NEMS is stretched to respond to the KIG assumptions. OnLocation did not attempt to modify the model structure to allow more flexibility in the way that it responds to the KIG assumptions. Despite the model operating outside the range which it generally operates, we believe that the results of the KIG scenarios are directionally correct and provide a potential range of outcomes. The following list of bullets describes factors that might affect where one might fall in this range.

- **Oil Supply:** The significant reductions in domestic oil supply associated with the KIG scenario result in the model depending heavily on oil and petroleum product imports. The external supply curves used to represent the rest of the world oil supply and demand are hard pressed to reflect the KIG oil market conditions. If the international markets of oil supply and demand were represented more fully, the steep price rises would be ameliorated to an unknown extent.
- **Natural Gas Supply:** In addition to the restrictions on domestic natural gas supply, the KIG scenario restricts the ability of the model to import alternative supplies. The scenario limits the imports across Canadian pipelines to effectively current capacity levels and does not allow the expansion of LNG import terminals. Both assumptions reflect the KIG scenario. By shutting off alternative sources of natural gas, the model seeks a solution within its fuel substitution capability. The power sector can and does respond but the industrial sector and other sectors have much less flexibility in this modeling framework. As the very high natural gas prices persist throughout the model forecast, these prices would likely result in more adjustments in these sectors and perhaps even a preferential allocation of supply to certain sectors (e.g., residential) as has been the case in the past. In addition, the energy consuming equipment choices in the industrial and buildings sectors are based on historical buying behavior that would likely change given the prospect of perpetual high fossil energy prices.
- **Coal Supply:** Limits were imposed on coal production expansion by restricting coal output to levels recently achieved. To represent the depletion of existing coal mines, a gradual reduction in the coal supply potential in each region was imposed. As the power sector moves away from high priced natural gas, there is an initial surge in the use of coal, but this is quickly reversed and a steady decline in coal consumption emerges. Since the restriction in coal output was modeled through a proxy, the coal industry response might likely yield a variation of this response. The initial surge in coal use provides a relief valve for the model and thereby reduces the shorter-term impacts within the scenario.
- **Uncertainty:** Projections get more uncertain the further into the future they go, but the severe fuel availability limitations imposed by the KIG scenario make the projections even more uncertain since the model's use of trends based on historical and current technologies and behaviors do not include the extreme assumptions of the KIG scenario.

About OnLocation, Inc.

OnLocation/Energy Systems Consulting is recognized as a leading energy consultant providing objective quantitative analysis to a diverse set of energy policy stakeholders. Since 1984, OnLocation has served a broad range of government and industry clients with a common interest in energy and the environment. OnLocation's experienced professionals rely on thorough research and analysis to achieve practical and customized solutions for our clients. To help our clients understand the implications of the challenges facing our energy system, we develop, modify and apply a variety of computer models to examine potential energy trends, impacts of proposed government policies and the associated financial and economic impacts of energy related investment decisions. Collectively, the staff of OnLocation has over 100 years of working experience with integrated energy models including the National Energy Modeling System (NEMS), EIA's widely recognized energy model. OnLocation's senior staff and associate consultants have provided insights and solutions to the business and policy challenges of the Department of Energy, Environmental Protection Agency, energy corporations and various non-governmental organizations that support policymakers in Congress and elsewhere.

A common interest of many of our clients has been the design and potential impact of various energy and greenhouse gas reduction policies. OnLocation uses the NEMS model to analyze a wide variety of carbon policy formulations include carbon taxes, cap-and-trade schemes, and clean energy standards, as well as rate-based and mass-based options proposed in the Clean Power Plan. We have also used NEMS to examine the potential impacts of energy policies such as various types of tax incentives, and efficiency standards under a variety of energy futures. Each policy option has a unique set of incentives and challenges for market players that produce different outcomes for carbon emissions reductions, energy prices, fuel mix, energy supply markets and energy efficiency. Analysis of energy and environmental policies such as these require a fully integrated assessment of key issues and policies within a single model combined with the multi-sectoral expertise that OnLocation offers. A thorough understanding of all the NEMS energy sectors is vital to properly analyzing and understanding the implication of alternative energy policies.

Prior Clients and Studies

Our experience includes a wide variety of energy policy and climate-related modeling for government agencies, non-government organizations, and energy corporations. Our modeling activities in support of the Department of Energy Office of Energy Policy and Systems Analysis (DOE-EPSA) encompass a wide variety of climate-related issues, complementary policies, model comparison activities, and collaboration with DOE program offices and laboratories for scenario design and data needs. Our long-term support for the Bipartisan Policy Center adds to our experience using NEMS for a variety of climate and energy studies. Comprehensive multi-sector analysis for Resources for the Future (RFF), the National Energy Policy Institute (NEPI) and the U.S. Climate Action Partnership (USCAP) provided us with opportunities to analyze complementary policies in all sectors of the economy using NEMS as well as communicate with a diverse mix of stakeholders. NEMS modeling support for the USCAP Blueprint report and for Congressional testimony by the Clean Air Task Force (CATF) on the Lieberman-Warner cap-and-trade proposal provided us with the ability to use our policy insights to influence Congressional legislation on climate change and to work with clients who were not modelers themselves. We also successfully applied NEMS to analyze the impact of current tax provisions on greenhouse gasses for the National Academy of Sciences.

Appendix: KIG-NEMS, A Description of the NEMS Modifications

The reader should refer to the [Caveats and Limitations](#) section of this report for a greater perspective on this application of KIG-NEMS.

In order to capture the impacts of limiting US energy production associated with the API specification for the Keep It In The Ground scenario, a number of changes were required in the NEMS model. The following table captures at a high level the changes OnLocation made to accommodate these specifications.

PV Over-Generation Mitigation	Coal Production Restrictions	Oil and Gas Production Restrictions	Infrastructure Expansion Restrictions
<ul style="list-style-type: none">The aggregation of annual time periods in the electricity model leads to an over valuation of utility-scale PV in the AEO2016.OnLocation has implemented a model modification that provides a better view of potential over-generation (curtailments) of PV at high levels of penetration -- The model can still build PV that will be curtailed but sees the reduced economic value of the capacity.The capacity credit of PV was also reduced more severely as its share of generation is added to reflect the shift in timing of net peak loadAs in the standard NEMS, PV (as well as wind) increase grid spinning reserves requirements<i>Note, the latest AEO2017 version of NEMS includes this code modification.</i>	<ul style="list-style-type: none">Because the KIG-NEMS coal model does not have explicit representation of individual mines, a gradual reduction in the coal supply potential in each region was the next-best proxy for shutting off new mine developmentAn annual reduction was applied to the maximum coal production allowed	<ul style="list-style-type: none">All new hydraulic fracking and conventional discovery and exploration wells were eliminated starting in 2018Existing EOR was allowed expand but there is less potential available due to reduced conventional production over timeNew federal and state offshore drilling leases were eliminated	<ul style="list-style-type: none">Canadian cross-border pipeline capacity was restricted to 2015 levelsAssumed minimum U.S. NG exports to Canada were removed starting in 2018Potential Mackenzie and Alberta NG pipeline expansion was eliminatedNo new LNG import terminals are allowed in the KIG scenarios and existing LNG export terminals were not re-permitted to allow for imports.

VETERANS AND ENERGY

OPPORTUNITIES IN THE OIL & NATURAL GAS INDUSTRY

Vets4Energy



A vast opportunity exists for the oil and natural gas industry to attract, retain, and develop lifelong careers for veterans in the industry. Over the next four years, the Department of Defense estimates that approximately one million service members will transition out of the military. In addition, the Department of Veterans Affairs reports that there are more than 12 million veterans under the age of 65 living in the U.S. These veterans and military service members are highly trained in a wide variety of occupational areas; **their extensive skills attained from their military training and experience make them ideal candidates to fill the projected 1.9 million job opportunities available in the oil and natural gas industry.**

VETERANS IN OIL & GAS

Over the last several years the number of veterans working in the oil and gas and petrochemical industries has been growing with **nearly 185,000 veterans employed in 2014**. These veterans are diverse, with **nearly 6,000 female veterans and more than 41,000 minority veterans filling positions in all sectors of the industry and across all regions of the country**. The West South Central, Middle Atlantic, and South Atlantic regions are especially prominent for veterans, with those three regions accounting for 60% of all veterans employed in the oil and gas industry. The oil & gas and petrochemical industries consistently employ larger shares of veterans than both the government and the private sector.

In 2014, veterans accounted for:

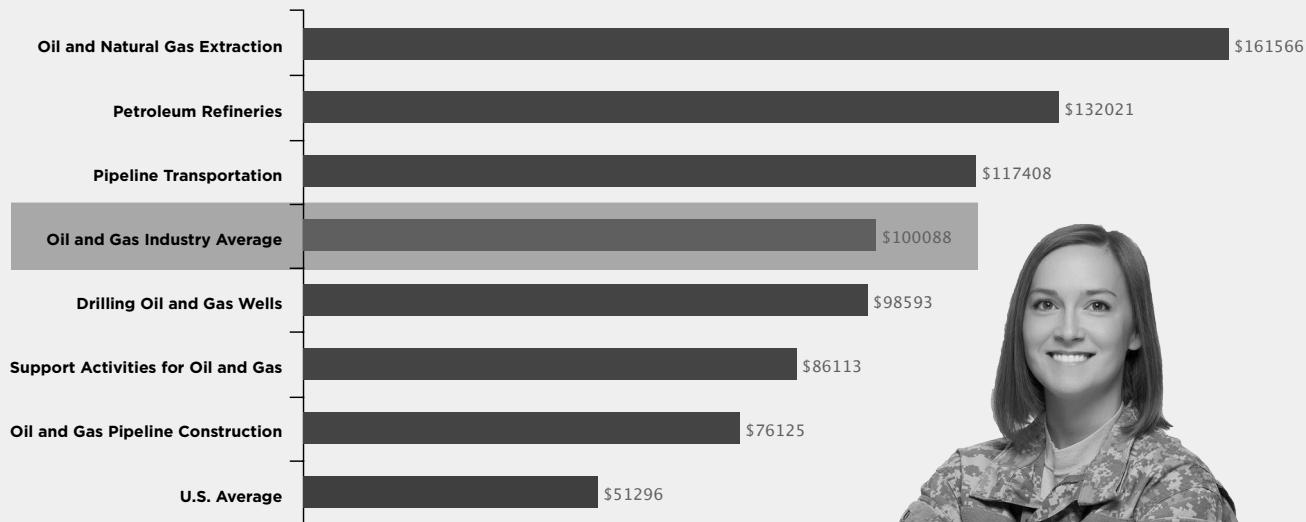
10.5% of the oil & gas and petrochemical industry workforce	10.4% of the government workforce	6.5% of the private sector workforce	7% Overall veterans accounted for 7% of total employment in the U.S.
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VETERANS AND ENERGY

BENEFITS

Jobs in the oil and natural gas industry offer good benefits, high pay, and the opportunity to make a difference. Based on 2014 average annual wage data from the Bureau of Labor Statistics, **the average pay in the oil and gas industry is nearly \$50,000 higher than the U.S. average.**

AVERAGE ANNUAL WAGE - 2014



CONNECTING MILITARY TRAINING TO OIL & GAS JOBS

Workforce training is critical to the projected industry growth that will keep the nation at a competitive advantage and provide the energy the nation depends on. Veterans come to the civilian workforce with extensive technical and nontechnical skills gained through military experience and training; many of these skills have direct applicability to the oil and gas industry, making it an ideal industry for transitioning service members and veterans.

A key element in achieving a growing level of veterans to fill oil and gas industry jobs is to relate those skills that they have developed to the skills needed in industry. The challenge of translating military skills to civilian occupations can be daunting for both veterans and hiring managers. This is why the American Petroleum Institute has **developed the *Veterans Energy Pipeline*, an online tool for veterans and civilians that highlights the links between military occupations and top oil and gas jobs.** The tool also shows where there may be gaps in needed skills; it is vital to connect veterans with ways to supplement their skills with additional education and training that may be required for available positions.

Access the tool by visiting www.veteransenergypipeline.com.



To: Jason Funes[jason_funes@ios.doi.gov]
From: Benjamin Knotts
Sent: 2018-02-04T22:49:28-05:00
Importance: Normal
Subject: RE: Confirmation for Lobby Day
Received: 2018-02-04T22:49:33-05:00

Jason – how do I pronounce your last name? Want to be sure.

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA | www.thevirginiatrust.com

From: Jason Funes [mailto:jason_funes@ios.doi.gov]
Sent: Friday, February 02, 2018 11:25 AM
To: Benjamin Knotts <BKnotts@afphq.org>
Cc: Wynn, Todd <todd_wynn@ios.doi.gov>
Subject: Re: Confirmation for Lobby Day

Also can you provide a copy of the agenda when it's available and the time when I'll be presenting?
That would be extremely helpful.

Thanks,

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
(202) 208-5541

On Feb 2, 2018, at 11:15 AM, Wynn, Todd <todd_wynn@ios.doi.gov> wrote:

Ben,

I think Jason sent you a confirmation. But figured Id connect the dots here to make sure.

Todd

On Wed, Jan 31, 2018 at 4:38 PM, Benjamin Knotts <BKnotts@afphq.org> wrote:
Hey Todd,

Going to send logistics but need to know if ya'll are solid. Thanks.

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia
804.221.5879 | bknotts@afphq.org | @AFPVA | www.thevirginiatrust.com

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Todd M. Wynn
Director of the Office of Intergovernmental and External Affairs
Office of the Secretary
U.S. Department of the Interior
Desk: (202) 208-6649
Cell: (202) 897-7269

NOTE: Every email I send or receive is subject to release under the Freedom of Information Act.

To: Benjamin Knotts[BKnotts@afphq.org]
From: Funes, Jason
Sent: 2018-02-04T23:14:13-05:00
Importance: Normal
Subject: Re: Confirmation for Lobby Day
Received: 2018-02-04T23:14:45-05:00

My last name is pronounced like:
Fooonez

Also if you needed a short brief about me for intro:

"Jason Funes works for the Department of the Interior in Secretary Ryan Zinke's Office of Intergovernmental and External Affairs. As a first generation American from a family of ranchers in Central America, Jason appreciates the value of hard work, freedom from tyranny, the American Constitution, free market capitalism, and making America great again."

I didn't think you needed a picture, but let me know if you do.

Feel free to call (202) (b)(6) or email me with any other questions. I look forward to meeting you and speaking tomorrow!

Jason Funes
Special Assistant
Intergovernmental and External Affairs
Office of the Secretary
Department of the Interior
Office: (202) 208-5541

On Sun, Feb 4, 2018 at 10:49 PM, Benjamin Knotts <BKnotts@afphq.org> wrote:

Jason – how do I pronounce your last name? Want to be sure.

Ben Knotts | Grassroots Director | Americans for Prosperity - Virginia

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From: Jason Funes [mailto:jason_funes@ios.doi.gov]
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